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Those Who Need it Most: Maximizing Transit Accessibility and Removing Barriers to Employment in Areas of Concentrated Poverty

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This research assesses the transportation assets and challenges faced by residents of Areas of Concentrated Poverty (ACPs), paying special attention to ACP50s—ACPs in which people of color comprise more than 50% of the population. The authors develop a graphically-facilitated survey blending multiple choice, free response, cognitive mapping and discussion questions to capture unmet transportation needs and user experience information difficult to gather in traditional travel behavior surveys. They find that participants' activity spaces vary significantly based on car availability and local built form and that pedestrian environments around stops affect the experience of using transit in ACPs more strongly than transit service itself, leading to the conclusion that transit- and pedestrian-oriented community design is a significant equity issue.

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THOSE WHO NEED IT MOST: MAXIMIZING TRANSIT ACCESSIBILITY AND REMOVING BARRIERS TO EMPLOYMENT IN AREAS OF CONCENTRATED POVERTY

FINAL REPORT

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EXECUTIVE SUMMARY

The regional transitway system currently being developed in the Twin Cities region—including existing and proposed transitways, as well as metro and rapid bus lines—will offer significant employment accessibility benefits to some of the most disadvantaged areas in the Twin Cities: the ACPs (Areas of Concentrated Poverty) and ACP50s (Areas of Concentrated Poverty in which greater than 50% of residents are people of color) identified by the Metropolitan Council. Providing fast, reliable and affordable transit connections between these areas and regional employment centers is a crucial action in attempting to lift disadvantaged populations out of poverty. However, although proposed Twin Cities transitway alignments are largely set, planning decisions including station siting, connecting bus service improvements and station area pedestrian infrastructure improvements have yet to be made which could affect the size of the accessibility benefits disadvantaged population groups actually receive.

In the research described in this report, we take an innovative approach to reaching difficult-to-reach, disadvantaged populations. First, we meet disadvantaged populations where there are, by tabling at locations they would visit in their daily lives, such as food shelves, social service providers, libraries and transit centers. In this way, our data collection fills waiting time rather than taking free time. Second, we employ a brief graphically facilitated survey employing visual aids, cognitive mapping and a mix of closed- and open-ended questions administered one-on-one by a human facilitator. This survey design improves accessibility and attractiveness to potential participants, while acting as a conceptual aid and mnemonic device. Finally, and unusually for the transportation field, we generally employ a mixed-methods approach, blending quantitative and qualitative data and analysis techniques. This approach provides discrete, quantitative context while offering a degree of qualitative richness not possible in traditional survey research for a much smaller investment of both participants' and facilitators' time per response than traditional qualitative interviewing.

We analyze the data generated by this instrument through a mix of descriptive statistics, geospatial analysis and qualitative content analysis. Specifically, our analysis focuses on disadvantaged Twin Cities' residents travel patterns and resources, use of informal transportation networks, unmet travel needs, job search processes and experiences accessing and using transit.

The survey results paint a clear picture of opportunity constrained by mobility in Twin Cities areas of concentrated poverty. Differing sizes of activity spaces based on car access, as well as direct statements about using transit, show a widely shared understanding of a need for improved transit in these areas. In addition, comments about difficulties with transit use combined with the significant number of participants from carless and car deficit households who do have large activity spaces or crosstown commutes point to a group of Twin Cities residents who have no choice but to accept burdensome commutes to get by.

Two general sets of issues with using transit appear. One set of issues concerns regional accessibility—what destinations one can access, or how convenient or burdensome it is to access needed regional

destinations such as a workplace. These issues deal with the functional possibility of using transit for a given trip. The other set of issues revolve around local access to transit and are primarily concerned with things like safety, comfort and security. These issues deal more with the pleasantness of using transit but still powerfully shape the quality of life of regular transit riders—particularly transit-dependent riders who cannot self-select for more pleasant trips.

These findings lead us to the conclusion that commonly understood “best practices” in transit-oriented community planning—such as universal provision of wide, well-maintained sidewalks, traffic calming measures on streets, frequent, convenient and safe street crossings, as well as the short walking distances that come with compact development and diverse land uses—are best practices for everyone. It follows from this realization that pedestrian- and transit-oriented design are social equity issues in addition to being quality-of-life and transit system efficiency issues.

For these reasons, we believe the equitable implementation of a modern regional transit system in the Twin Cities requires a comprehensive program of pedestrian and bicycle improvements aimed at making an easy, safe, pleasant walk to a transit stop and wait for a transit vehicle an unremarkable occurrence throughout the region, with a special focus on areas of concentrated poverty.

CHAPTER 1: INTRODUCTION

The regional transitway system currently being developed in the Twin Cities region—including existing and proposed transitways, as well as metro and rapid bus lines—will offer significant employment accessibility benefits to some of the most disadvantaged areas in the Twin Cities: the ACPs (Areas of Concentrated Poverty) and ACP50s (Areas of Concentrated Poverty in which greater than 50% of residents are people of color) identified by the Metropolitan Council. Providing fast, reliable and affordable transit connections between these areas and regional employment centers is a crucial action in attempting to lift disadvantaged populations out of poverty. However, although proposed Twin Cities transitway alignments are largely set, planning decisions including station siting, connecting bus service improvements and station area pedestrian infrastructure improvements have yet to be made which could affect the size of the accessibility benefits disadvantaged population groups actually receive.

Further, prior research suggests that improved transit systems are often necessary but not sufficient for improved employment outcomes among disadvantaged population groups (Fan, 2012). Besides accessibility, other barriers may lie in the way of the unemployed and working poor's efforts to better their lot in life. For example, low-income populations, especially low-income minorities, are often perceived as lacking marketable skills and/or "soft" people skills that are critical to job interview success (Houston, 2005). Low-income minorities also tend to concentrate in poor, urban neighborhoods that often are deprived of safe and convenient multi-modal connections to premium transit services (Talen, 2012). In addition, disadvantaged population groups face unique time constraints and have complex travel patterns that may prevent them from taking advantage of improved transit systems (Roy, Tubbs, & Burton, 2004). These conditions lead us to the research question for this report: How can planners and policy makers maximize the benefits of transitways for disadvantaged communities?

Complex travel patterns, job search needs, family responsibilities and the informal transportation networks that spring up to serve all three underscore a critical problem in planning transit to serve marginalized populations: Traditional travel behavior data collection approaches are well adapted to generating detailed information on realized travel behavior but relatively ineffective at collecting data on unmet travel needs. In other words, the planning profession's standard tools for learning about travel behavior can provide us with a wealth of information on the trips people actually make—by definition, trips that are possible given the resources available to them and the current transportation system—but cannot provide us similar information on the trips people would benefit from being able to make if their resources were greater or the transportation system were organized differently than it is at present. Beyond this issue, traditional travel behavior surveys and activity diaries of the types employed by the Metropolitan Council's Travel Behavior Inventory (as well as by similar periodic regional travel behavior surveys conducted in other metropolitan areas) frequently suffer from the under-sampling of poor people, people of color and immigrants common to large social surveys in general. Further, effective travel behavior data collection requires translating complex transportation planning concepts into terms understandable by respondents, and encouraging participation requires making the data collection process accessible. Traditional, telephone-based or written surveys may not serve either of these needs

well in the case of marginalized populations with significant demands on their time. First, they offer little opportunity to assist the respondent in the form of a human facilitator. Second, they require dedicating precious free time to responding to a survey that provides them with no direct benefit.

In the research described in this report, we take an innovative approach to addressing these problems in three ways. First, we meet disadvantaged populations where they are, by tabling at locations they would visit in their daily lives, such as food shelves, social service providers, libraries and transit centers. In this way, our data collection fills waiting time rather than taking free time. Second, we employ a brief graphically facilitated survey employing visual aids, cognitive mapping and a mix of closed- and open-ended questions administered one-on-one by a human facilitator. This survey design improves accessibility and attractiveness to potential participants while acting as a conceptual aid and mnemonic device. Finally, and unusually for the transportation field, we generally employ a mixed-methods approach, blending quantitative and qualitative data and analysis techniques. This approach provides discrete, quantitative context while offering a degree of qualitative richness not possible in traditional survey research for a much smaller investment of both participants' and facilitators' time per response than traditional qualitative interviewing.

We analyze the data generated by this instrument through a mix of descriptive statistics, geospatial analysis and qualitative content analysis. Specifically, our analysis focuses on disadvantaged Twin Cities' residents travel patterns and resources, use of informal transportation networks, unmet travel needs, job search processes and experiences accessing and using transit.

The following chapters place this research in the context of the existing body of planning literature, describe the methodology employed in the research in detail and present the results of our analysis. We conclude with policy recommendations aimed at maximizing the benefits of Twin Cities transit investments for those who need them most.

CHAPTER 2: LITERATURE REVIEW

Transitway implementation can dramatically change regional transit accessibility—particularly when combined with appropriate, supportive bus service changes (Fan, Guthrie, & Levinson, 2011). Prior research on the Metro Blue Line shows these benefits include the working poor, and that the working poor, along with their employers appear drawn to transitway station areas and connecting bus routes (Fan, Guthrie, & Teng, 2010). Other research, however, has suggested that the commute patterns of low-income and minority workers are often poorly served by transit due to non-CBD destinations and/or non-traditional schedules (Clifton & Lucas, 2004). Many particularly disadvantaged population groups—including single parents, immigrants and working-class families—often have personal responsibilities and family obligations which can make reliance on transit difficult (Roy et al., 2004). Research on how transit access impacts employment outcomes for the socioeconomically and transportation disadvantaged produces mixed results. For example: studies focusing simply on transit availability and/or quality (regardless of mode) show little to no impact on employment outcomes for disadvantaged population groups (Bania, Leete, & Coulton, 2008; Sanchez, Shen, & Peng, 2004; Thakuriah & Metaxatos, 2000). Three studies focused either on Job Access Reverse Commute (JARC) bus service (Thakuriah & Metaxatos, 2011) or on transit accessibility in regions with large transitway systems (Kawabata, 2002; Kawabata, 2003), however show significant positive impacts on employment outcomes. In particular, Kawabata (2003) finds the least sub-regional disparity in employment outcomes in Boston—the region studied with the best-developed regional transit system. Taken together, these results indicate that quality transit can have significant benefits for disadvantaged population groups, but that it is crucial to consider the level of accessibility provided to areas with large concentrations of those groups and to consider accessibility to jobs in which members of those groups are likely to work.

The literature also shows that significant obstacles to gaining and retaining employment exist for socioeconomically disadvantaged population groups that have nothing to do with transportation. Houston points to the concept of "employability", encompassing both "hard" job skills (as measured by education and/or official qualifications) and "soft" skills, such as reliability, professional demeanor and people skills, adaptability and problem solving (Houston, 2005). Other researchers highlight skills mismatch—a lack of qualifications for jobs disadvantaged groups do have transportation access to—as a key explanation of unemployment in RCAP's (Bauder & Perle, 1999; Handel, 2003; Houston, 2005; Stoll, 2005). In addition, familial responsibilities and non-traditional schedules can reduce disadvantaged groups' abilities to take advantage of transit improvements (Clifton & Lucas, 2004; Roy et al., 2004). All this underscores the importance both of removing barriers to transit use for socioeconomically disadvantaged populations, and of improving access to appropriate education and job training opportunities.

2.1 ROLE OF SOCIAL NETWORKS IN THE JOB SEARCH PROCESS

In addition to having physical access to opportunity, having information about opportunity is also crucial. While accessibility analysis may show that 10,000 jobs are accessible from a given location in 30 minutes' travel, an individual job-seeker likely knows about only a small fraction of them, and can likely identify an even smaller number they believe they are qualified for. As a result, the information networks job seekers can draw on play a strong role in determining their functional access to opportunity. These job information networks are often informal, hinging on familial and neighborhood social connections, putting workers in neighborhoods with low employment and labor force participation at a disadvantage (Ioannides & Datcher Loury, 2004). These job search information disparities can also serve to reproduce gender and racial disparities as well. Though direct bias appears more completely explanatory of gender disparities, *de facto* segregation of social networks partly accounts for racial disparities in job leads (McDonald, Lin, & Ao, 2009).

2.2 ROLE OF TRANSIT IN MARGINALIZED PEOPLE'S TRAVEL

Disadvantaged households employ a variety of strategies to manage transportation costs, which, while incurred accessing necessary destinations such as work, grocery shopping and medical clinics, are less fixed than housing, which is generally their greatest expenditure. These management strategies include use of alternative modes (e.g. transit, bicycling, walking) or relying on friends and family for rides. Significantly, this strategic management of transportation costs means that even fully car-equipped households frequently make some use of non-SOV transportation (Agrawal, Blumenberg, Abel, & Pierce, 2011). Use of transit in particular is strongly tied to economic disadvantage. As of the 2009 National Household Travel Survey, 16% of urban residents with household incomes of less than $15,000 used transit on their reported travel day, a percentage which halves for residents with household incomes from $15,000 to $19,999 and declines to 3% for urban residents with household incomes in the $60,000-$64,999 category (Mattson, 2012).

Despite this importance in the lives of the poor, the current transit renaissance underway in the United States does not always serve disadvantaged riders' interests. As transit once again becomes a desirable amenity in a given region, its planning can become captured by growth machine policies focused on the real estate sector as a center of economic development (Grengs, J., 2005; Smith, 2002). In addition, qualitative research shows that travel time penalties faced by low-income adults are often incompletely captured by quantitative research which fails to account for time spent dealing with unreliable low-cost transportation, and that transportation uncertainty and social strains caused by depending on others for rides significantly impact life experiences (Lowe & Mosby, 2016). These situations call for special scrutiny of who benefits from transit improvements.

2.3 SPATIAL SEGREGATION AND DISADVANTAGE

Despite the end of *de jure* racial segregation half a century ago, *de facto* or spatial segregation is still a common pattern of the American metropolis. Patterns of racial segregation have strong class components as well, particularly for African Americans. Even as of the 2010 Census, Black households were significantly less likely to interact with non-Black households than households of other races were to interact with households not of their own race. Poor Black households were significantly less likely to interact with affluent households than poor households of other races were as well, though all races were segregated by income (Intrator, Tannen, & Massey, 2016).

These patterns have been exacerbated by the housing crisis at the center of the Great Recession. In particular, the sub-prime mortgage crisis and its ripple effects throughout much of the housing market acted as a massive, forcible transfer of wealth from disproportionately minority working families to the financial sector. Spatial concentration of foreclosures also means this process represents a transfer of wealth from local communities to absentee landlords, in many cases creating geographies of marginalization echoing the urban ghettos of the pre-civil rights era (Lichter, Parisi, & Taquino, 2012).

Unlike socially excluded neighborhoods of the past, however, the neighborhoods so affected by the foreclosure crisis and the upward pressure it put on down- and mid-market rental housing are not overwhelmingly located in the inner city, or transit-accessible. The suburbanization of poverty is an emerging long-term trend in U. S. cities, one which has accelerated in recent years (Covington, 2015). From a transportation perspective, suburban concentrations of poverty doubly disadvantage their residents, as they frequently do not provide transit accessibility or the reasonable possibility for residents to rely on other low-cost modes (Glaeser, Kahn, & Rappaport, 2008).

2.4 TRANSPORTATION SYSTEMS OF POOR NEIGHBORHOODS

Transportation infrastructure was historically used to isolate poor, Black neighborhoods from affluent, white areas, and in some cases to demolish them entirely (Bullard, Johnson, & Torres, 2004). These infrastructure planning decisions, combined with housing segregation and automobile-driven job suburbanization combine to create to problem of spatial mismatch, characterized by an inability of disadvantaged, inner city workers to reach entry-level, living wage jobs (Kain, 1968; Kain, 2004). This situation also leads to a modal mismatch between disadvantaged (would-be) workers seeking access to jobs in automobile-dominated suburban areas and the downtown-focused transit they are (somewhat grudgingly) offered (Grengs, Joe, 2010). With transit systems and regional development forms organized as they currently are, some poverty researchers argue that transit is simply insufficient to connect highly marginalized populations, such as single mothers, with employment opportunities (Lichtenwalter, Koeske, & Sales, 2006).

In addition to regional accessibility deficits, however, poor neighborhoods frequently suffer from problems with safe, local pedestrian accessibility as well. Vehicle-pedestrian crashes are more common in poor, minority neighborhoods, even controlling for population and behavioral factors such as rates of

walking to work and automobile ownership (Cottrill & Thakuriah, 2010). This deficit in safety, and its consequent deficit in comfort levels, leads to seemingly paradoxical lower rates of physical activity in poor neighborhoods (Neckerman et al., 2009).

2.5 SUMMARY

Access to transportation is necessary but insufficient for connecting residents of disadvantaged neighborhoods with improved opportunities. Transit improvements can provide low-cost mobility to disadvantaged neighborhoods, but there is no guarantee they will serve the needs of disadvantaged residents under current conditions. In addition, areas of disadvantage face local access barriers to alternative transportation as well. The following chapter will describe our approach to collecting and analyzing data on travel behavior and resources, job searches, unmet transportation needs and experiences accessing and using transit with the aim of developing policies and practices to remedy the disparities identified in this chapter.

CHAPTER 3: METHODS

The data collection protocol for this research had to address several issues common to travel behavior research—reaching difficult-to-reach populations, communicating complex transportation planning concepts in accessible, intuitive terms and making participation in that research as attractive as possible. This chapter begins by describing our data collection protocol, and concludes by describing our approach to analyzing the data it generated.

3.1 SURVEY DESIGN

Designing the survey instrument offered the team a way use creativity and unconventional approaches to surveying and interviewing. Using symbols, maps, and other graphics allowed for a more engaging user experience, as compared to a more conventional travel behavior survey.

For example, the first page of the survey presents images of different transportation modes and resources one might use to facilitate travel grouped around a silhouette labeled "You" in English, Spanish, Somali and Hmong. This design is intended to be both engaging and conceptually elucidating, by creating an intuitive link between the participant and each of the modes and resources listed.

The survey also asked participants to draw maps of their daily travel and the routes they would use to access transit. In addition to providing an engaging break from filling out written or multiple-choice questions, these maps were generative as well. By having participants reenact their day or route to/from transit on the page in front of them, the facilitator gained the chance to ask for details such as modes used, difficulty of street crossings, surroundings, etc., while the act of drawing functioned as a memory aid to the participants themselves.

The survey went through many stages of design and revision to incorporate the principles of participatory design into a data collection instrument that could be used with large numbers of participants reasonably quickly in a wide variety of locations and circumstances. This iterative process allowed the team to translate pertinent research questions into easily digestible visual exercises. Combining some conventional survey methods with behavioral mapping and critical incident technique allowed interviewers to gather both concrete and abstract concepts from participants. (See Appendix A for a full questionnaire.)

3.1.1 Siting and Community Connection

The team began with a basic demographic analysis of the 12 identified ACPs. We followed this with a process of "ground truthing"—driving around neighborhoods directed by detailed maps to get a sense of the prevalence and locations of affordable housing, as well as to locate potential gathering places for reaching disadvantaged residents.

Figure 3-1 shows an example of the maps used. All multifamily housing units are identified in orange, and public housing projects are identified by numbered points overlaying an aerial photograph of the ACP. A pair of researchers would drive by each multifamily building on the map, recording a basic description on a worksheet. (See Appendix B.) While time-consuming, this process provided invaluable knowledge about the ACPs studied. This allowed us to identify potential sites, community places, and organizations within which to begin outreach and communication. We began by contacting people at housing complexes and community spots within the ACPs.

Overall, this method worked for urban areas, as there were enough community orgs and gathering spaces for us to talk to folks within the area. We also partnered with some folks within organizations that were hosting events to join them in their planned community-centered happenings.

Suburban areas were more challenging and finding community spaces in the designated ACP50's proved to be difficult. Contacting organizations within the larger city was more successful, but not necessarily useful.

Some of the places that were used for engagement included:

- Libraries
- Community centers
- Community events organized by partners
- Food shelves
- Churches
- Bus stops/transit centers,
- Apartment/public housing community rooms.

Strategic connections were made with individuals that had ties within each community in many cases.

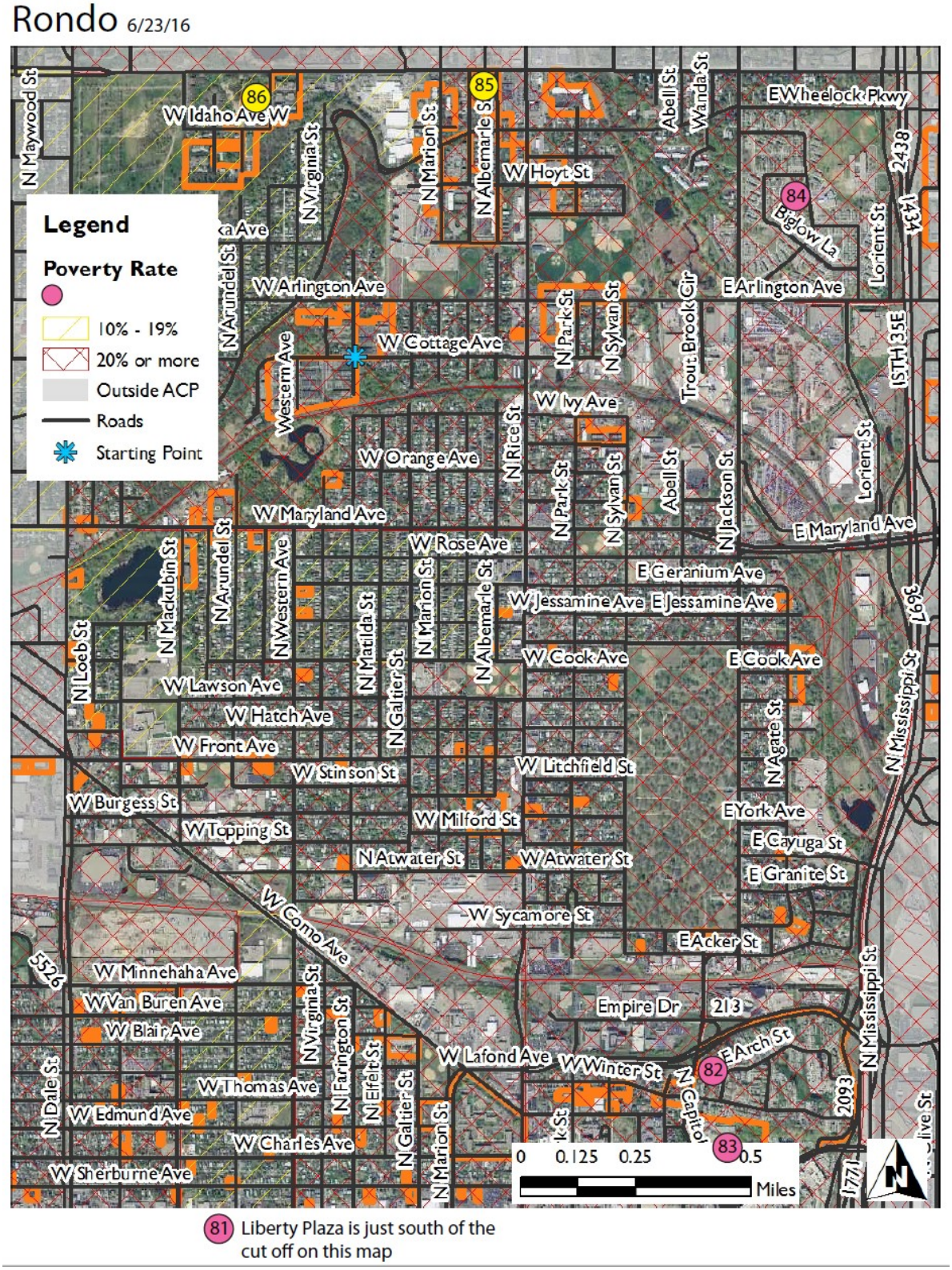

Figure 3-1: Example of Ground-Truthing Map

3.1.2 Engagement Hooks

Early on, we paired the data gathering process with a smoothie bike set-up (as a connection to transportation and as a way to engage people). The bike worked well in larger group settings, where people were coming and going frequently. The bike also worked well in an outdoor setting. In addition, we paired with folks doing healthy food access work, along with other types of community work (employment, transportation, housing work) for a multi-faceted approach. Food seemed to be a good tool to "break the ice" and get people interested; in cases where the bike was not appropriate, food was often offered (anything from chocolates to catered food).

3.2 ANALYSIS APPROACH

Our graphically facilitated survey generated a mix of quantitative and qualitative data. Quantitative data produced by the survey include use frequency of different transportation modes, daily trips made and destinations visited and general demographic background information. Qualitative data produced included things like participants' experiences accessing and using transit as well as qualitative categorizations of participants' travel patterns. These different types of data require different analysis approaches.

3.2.1 Quantitative Analysis

In examining the quantitative data generated by the survey, it is crucial to remember that our method for reaching difficult-to-reach disadvantaged populations did not allow for a probability sample, i.e. a sample in which every member of the survey population has an equal probability of being sampled. This compromise made in the interest of meeting people where they are, so to speak, means that our ability to conduct statistical analysis is limited, as there is no guarantee that the survey sample is statistically representative of the survey population. As a result, we cannot statistically generalize; in other words, we cannot say that a population which is statistically similar to the survey population will show similar behavior in terms of the characteristics measured by the survey.

What the quantitative data generated by the survey do allow for is easily understood context for the specific group of people who participated in the survey. To this end, we produce descriptive statistics describing the social, economic and demographic characteristics of participants, their transportation resources and mode choice behavior and their job search strategies and behavior. These statistics allows us to measure our degree of success in reaching poor, disadvantaged and/or unemployed residents of the areas of concentrated poverty that are the focus of the research, and to gauge how similar to the group of survey participants any given neighborhood's population is in implementing policies based on the results.

3.2.2 Qualitative Analysis

One of the advantages of our graphically facilitated survey is the degree of qualitative richness the data it generated possess. Existing as they do in the form of short to moderate length responses to a series of discrete questions, interspersed with hand-drawn maps and closed-ended quantitative questions, organizing those data is especially crucial to effectively analyzing them.

Using the NVivo 11 software suite, we began by automatically generated codes for each question producing qualitative data in its responses. We then manually coded the responses to these questions for recurring themes and concepts, allowing us to build up from the data to inductive theories about participants need for and interactions with transportation in a process known as grounded theory generation.

This coding including selecting and coding passages of text in verbal response questions based on the meanings and participants' understandings expressed in them. The hand-drawn maps of participants' daily travel were coded as well for travel behavior concepts arising out of recurring patterns in the maps themselves, such as "crosstown commute" or "small activity space". This coding allows us both to analyze the travel behavior of subgroups of our participants based on their social characteristics and responses to other question and based on how their responses to other questions vary with their travel behavior.

The results of this coding process allow us to query our dataset in a wide variety of ways. For example, we can ask the computer to show us all codes for responses to where participants travel to using transit broken down by income groups. Once such a query is made, we can generate a graphic matrix indicating recurring combinations of codes/questions/participant groups worthy of further investigation, then display all answers arising out of them in their entirety, allowing for efficient, organized human analysis of themes and concepts in the data. See for an example of the coding process.

This highly organized qualitative interpretation of participants' experiences forms the core basis of our analysis. The following chapter presents the results of that analysis.

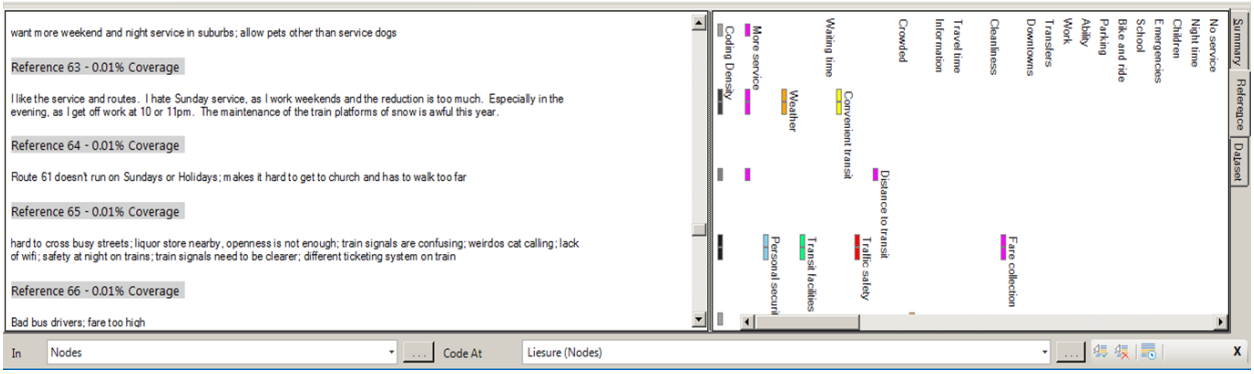

Figure 3-2: Qualitative Coding Example

CHAPTER 4: RESULTS

This chapter presents the results of the graphically facilitated survey, beginning with a quantitative data distribution. We proceed from there with our travel behavior and qualitative analysis.

4.1 DATA DISTRIBUTION

The survey produced 196 responses. Figure 4-1 shows the distribution of responses among Areas of Concentrated Poverty included in the study. Response totals range from 9 to 22 per ACP. (The Northeast Minneapolis ACP dropped below the threshold to be considered an ACP during data collection, and only ever exceeded it due to a single high-rise senior housing complex. As a result, we redirected our resources to other ACPs after one outreach session.)

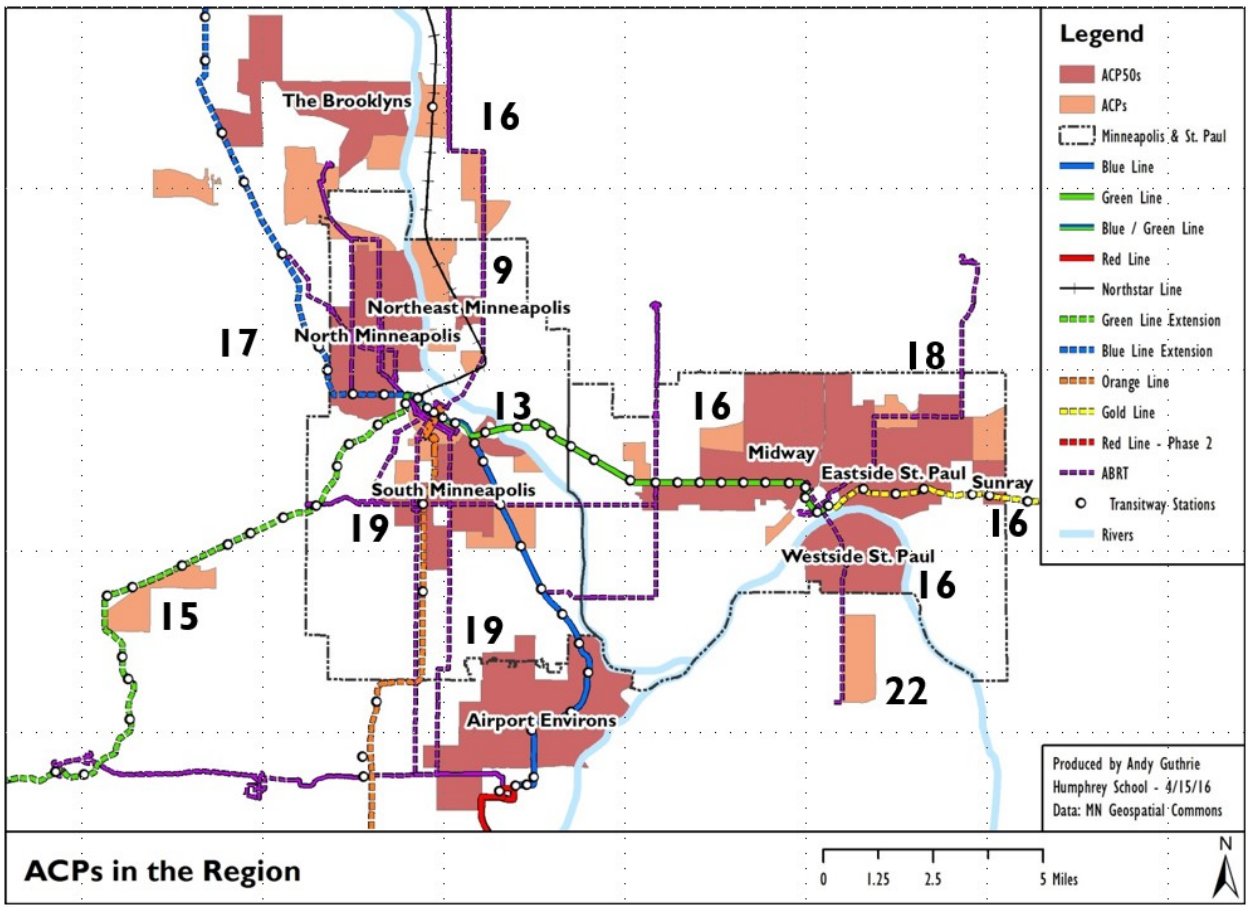

Figure 4-1: Response Distribution by ACP

As the map shows, we achieved a reasonable balance of urban and suburban responses. We also achieve a balance of responses from ACP50s and majority white ACPs.

Figure 4-2 presents a distribution of responses by self-reported race of respondent. The survey succeeded in oversampling people of color in general but fell somewhat short in terms of people of color other than African Americans. To some extent, this may be a consequence of our deliberate geographic distribution of responses, regardless of the population of each ACP. It also likely stems in part from language barriers, though survey facilitators fluent in multiple languages were provided where possible.

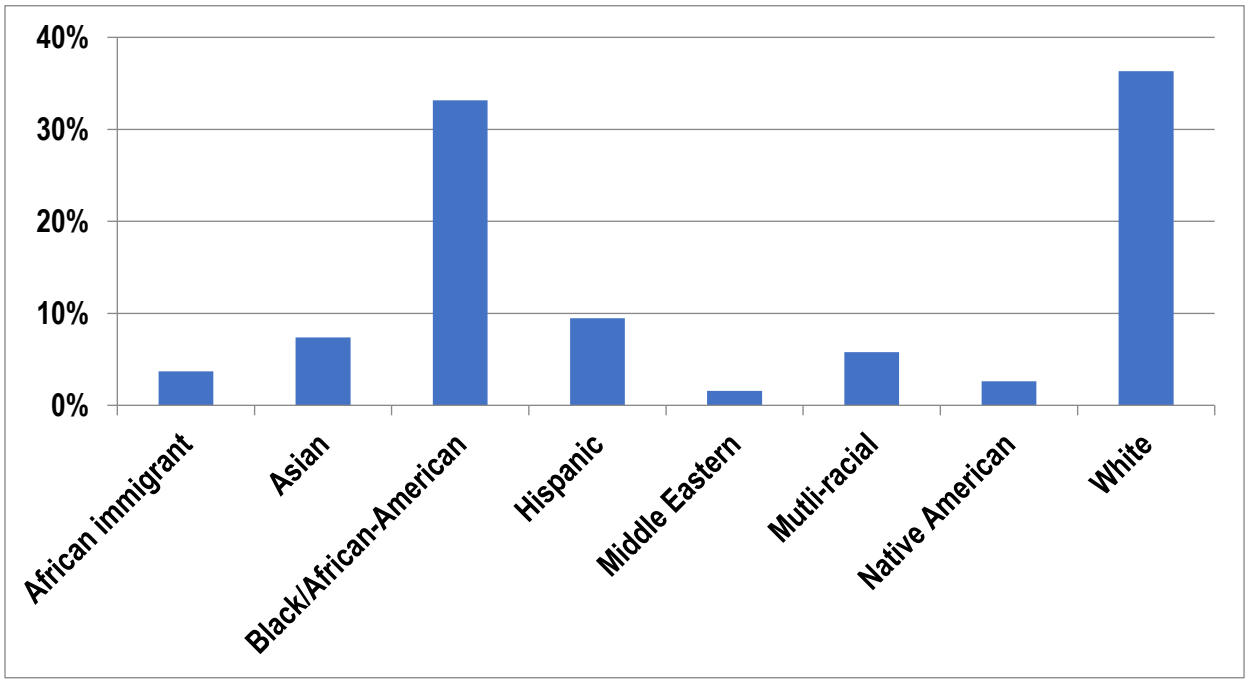

Figure 4-2: Racial Distribution of Respondents

The survey was quite successful in oversampling low-income populations, as shown in Figure 4-3. Participants with household incomes of less than $15,000 per year account for roughly 30% of responses, with participants from households with incomes of $15,000-$25,000 and $25,000-$35,000 accounting for roughly 20% of responses each.

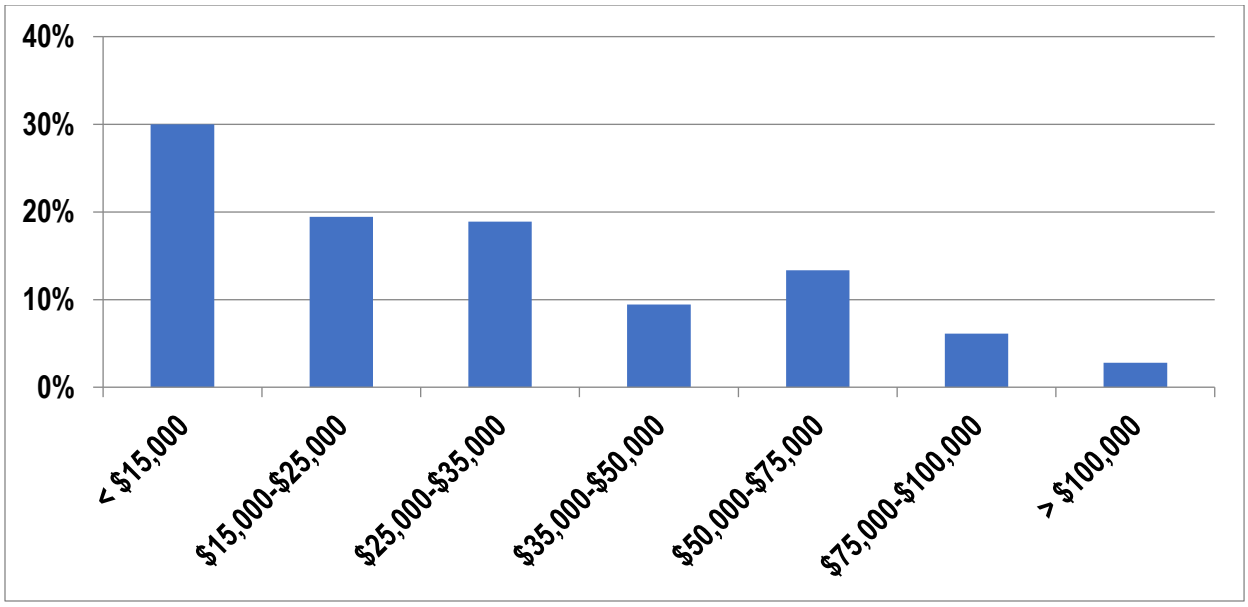

Figure 4-3: Household Income Distribution of Respondents

Figure 4-4 shows education levels of participants. A majority of participants have completed high school and/or some postsecondary education, though less than 40% have any type of post-secondary degree. Nearly 10% did not complete high school.

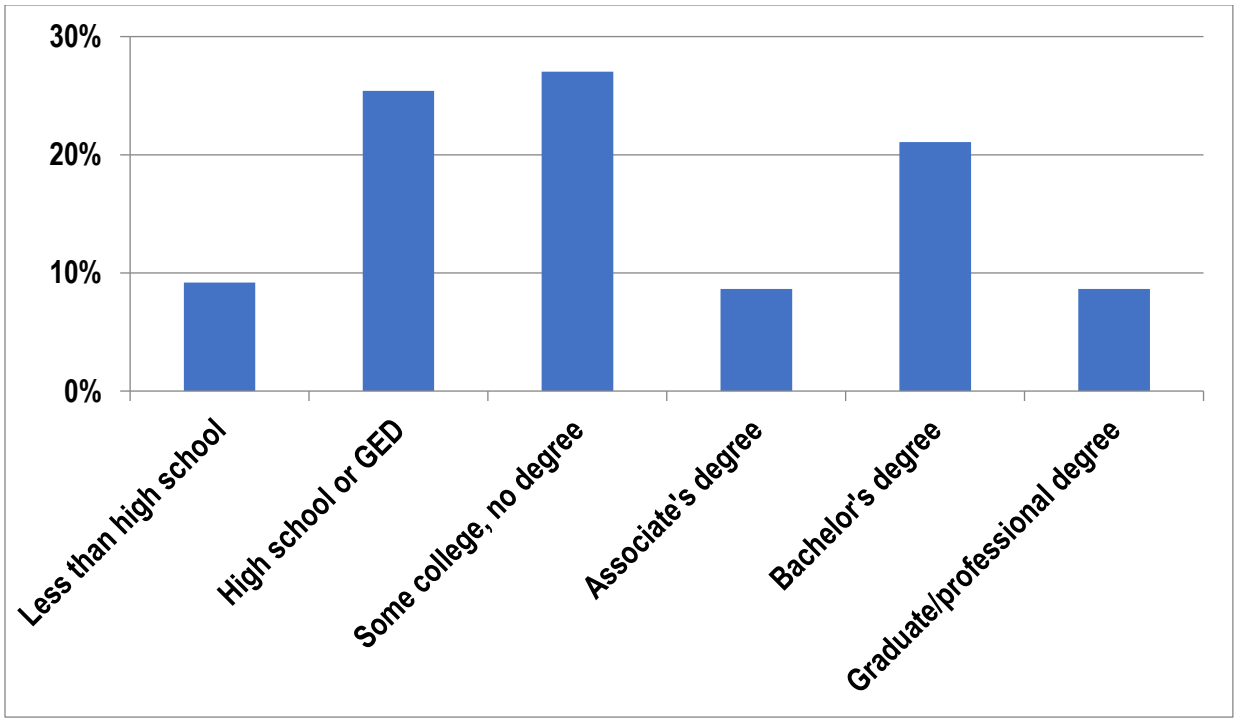

Figure 4-4: Educational Attainment of Respondents

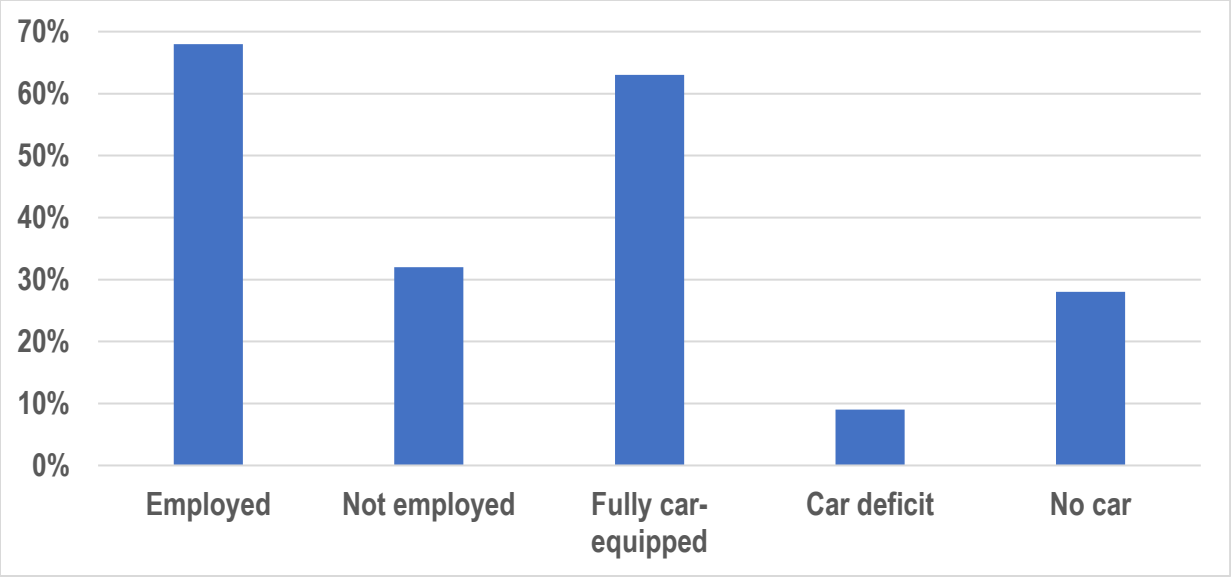

Figure 4-5: Employment and Automobile Access of Respondents

Figure 4-5 shows rates of employment and automobile access for survey participants. Despite the generally low-income nature of the sample, over two thirds were employed. (Not that "Not employed" here is not equivalent to "unemployed" in federal statistical terms. Our reported rate of employment is equivalent to the employment-to-population ratio.) Roughly 28% of participants live in carless households, while roughly 9% live in "car deficit" households, where adults outnumber cars.

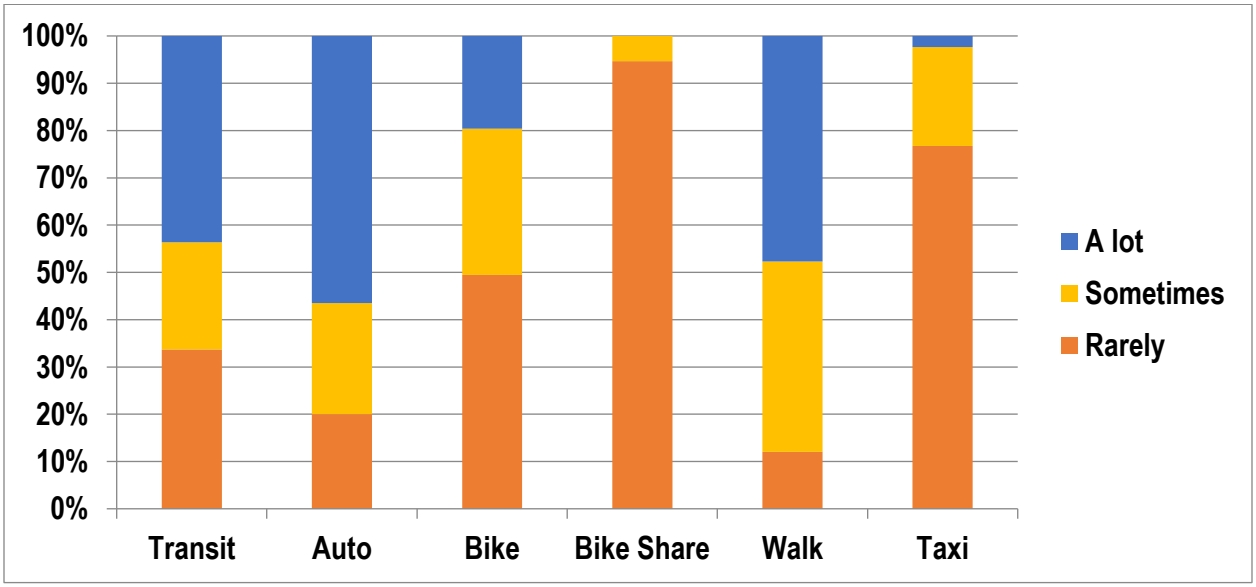

Figure 4-6: Use of Transportation Modes

Figure 4-6 shows the frequency with which survey participants use different transportation modes. Though automobile is the most common heavily and occasionally used mode, alternative mode use

rates in general and particularly transit use rates are considerably higher than among the Twin Cities population as a whole.

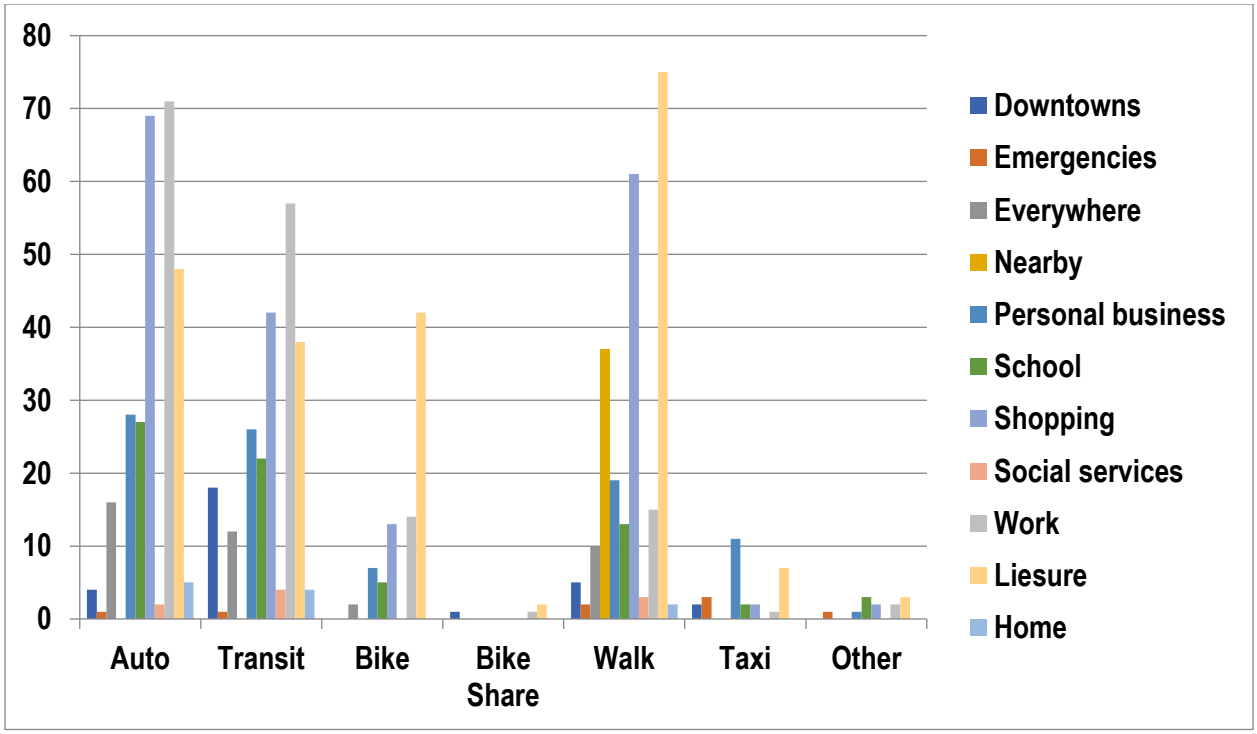

Figure 4-7: Trip Purpose by Mode

Figure 4-7 shows self-reported common trip purposes. Worth noting is the wide variety and large number of non-work trips being made using transit. This pattern paints a picture of a group of transit riders who depend on transit to accomplish much or most of their daily travel. The large number of non-recreational walking trips, especially for shopping, supports this contention.

Figure 4-8 shows use of non-vehicle resources participants use to facilitate their daily travel. Use of GoTo Cards is quite light for a group of participants with such a generally high rate of transit use. This may stem from the high representation of low-income people in the sample, as lower income riders are generally less likely to use either long-term passes or pre-loaded stored value cards as a result of having little cash on hand at any given time. The high rate of using cash to pay transit fares fits with this pattern.

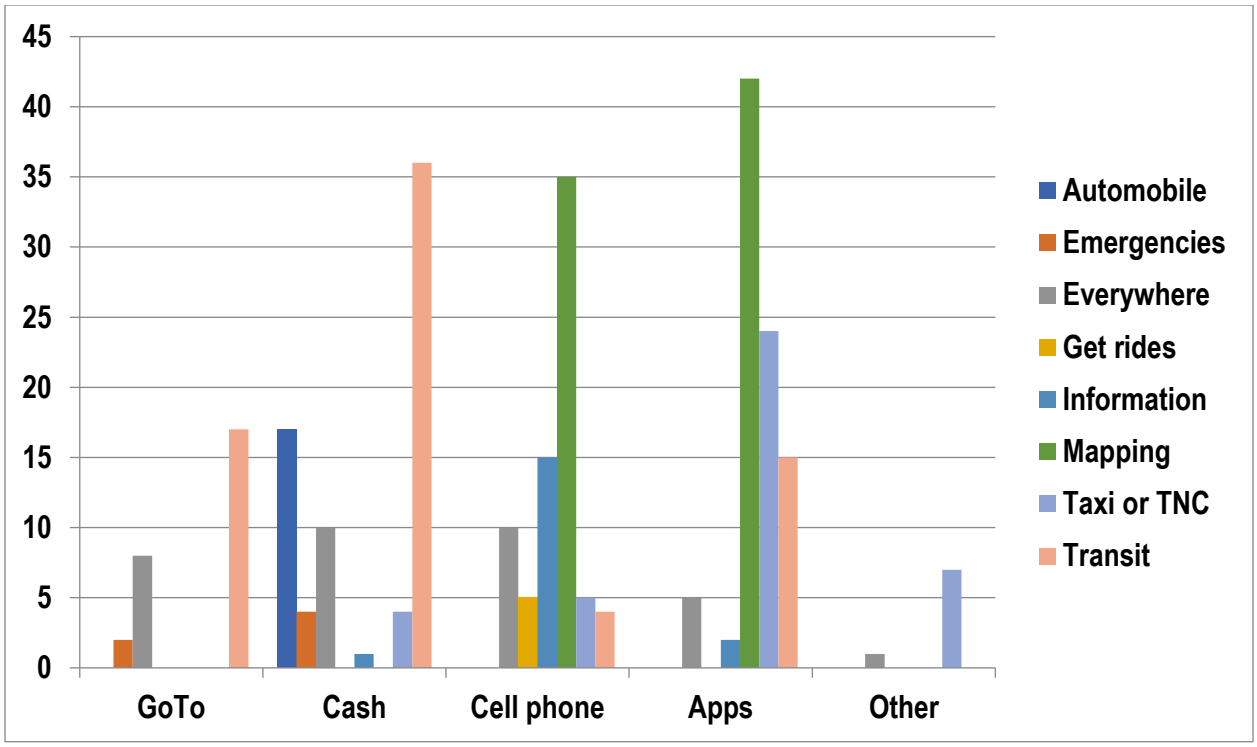

Figure 4-8: Use of Non-Vehicle Resources by Purpose

4.2 DAILY TRAVEL

The series of maps in Figure 4-9 through Figure 4-20 show the density of destinations visited in the survey question which asked participants to draw a map of their daily travel by ACP. These locations were geocoded using a grid overlay. They are displayed here using hatch patterns to identify how frequently participants visited each grid square. Patterns are based on a natural breaks classification for each individual neighborhood, and should be considered as representing an ordinal scale, not a numeric one.

Even aggregated to the ACP level, the sizes of activity spaces shown by these maps vary widely from cities to suburbs, as well as between individual ACPs in each. Several suburban ACPs, specifically Brooklyn Park-Brooklyn Center, Sunray and West Saint Paul, show evidence of a number of participants with very small activity spaces, suggesting significant mobility disadvantage, as small activity spaces for suburban residents are less likely to be a result of high accessibility as in urban areas.

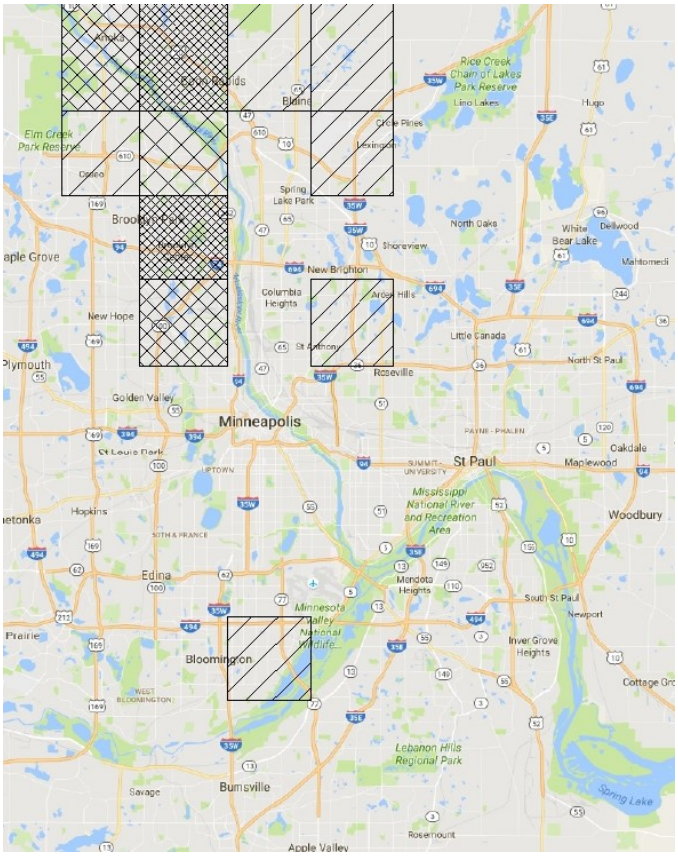

Figure 4-9: Brooklyn Park-Brooklyn Center

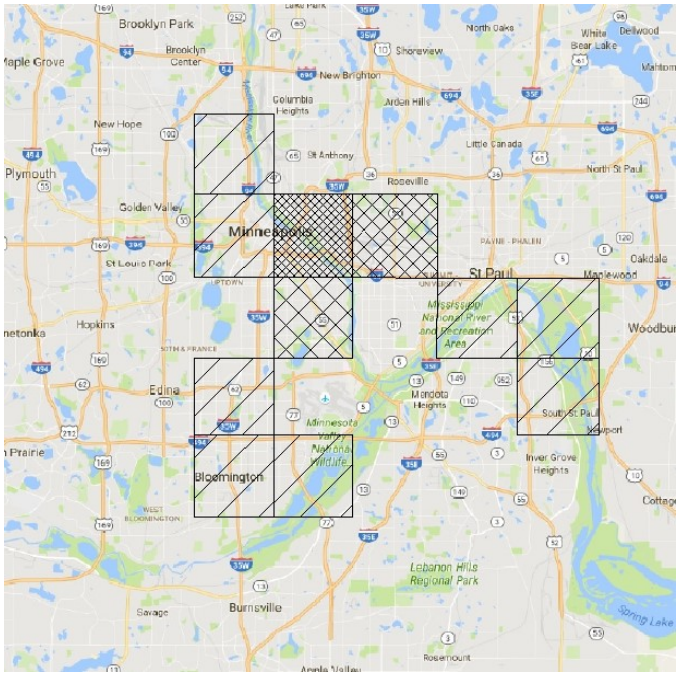

Figure 4-10: Cedar-Riverside

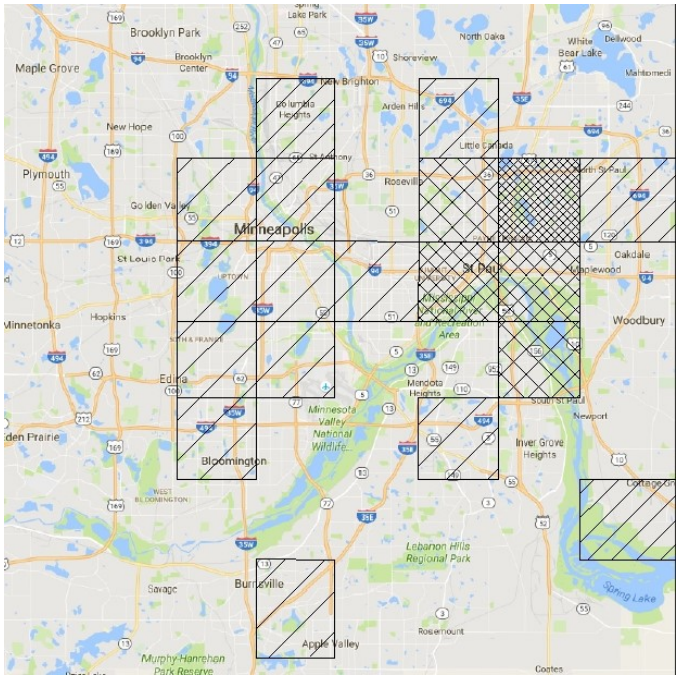

Figure 4-11: East Side Saint Paul

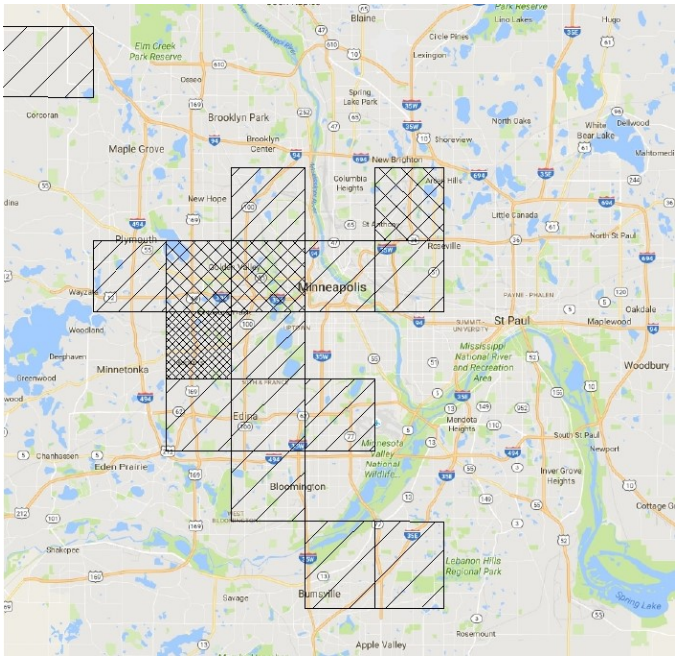

Figure 4-12: Hopkins

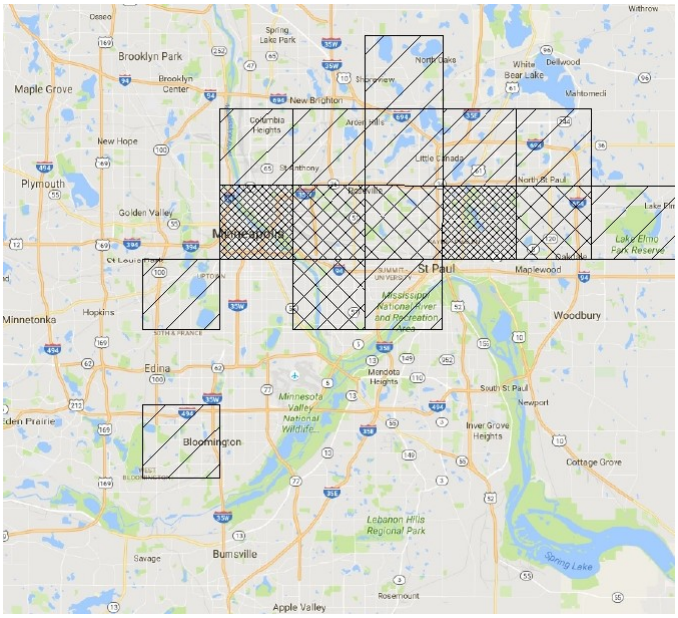

Figure 4-13: Midway

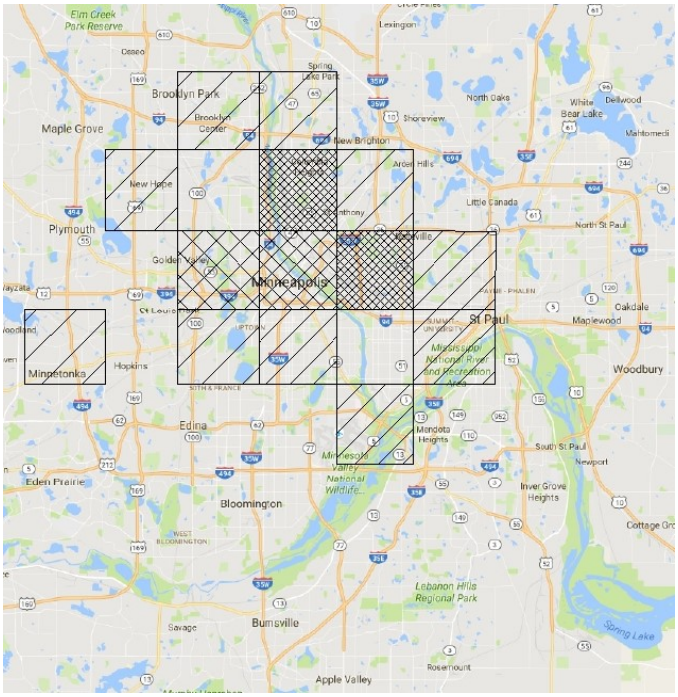

Figure 4-14: Northeast Minneapolis

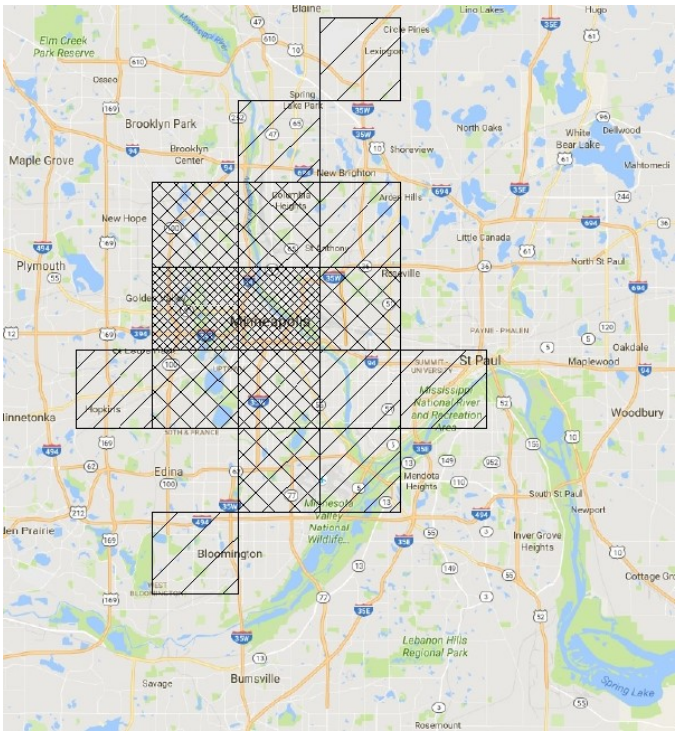

Figure 4-15: North Minneapolis

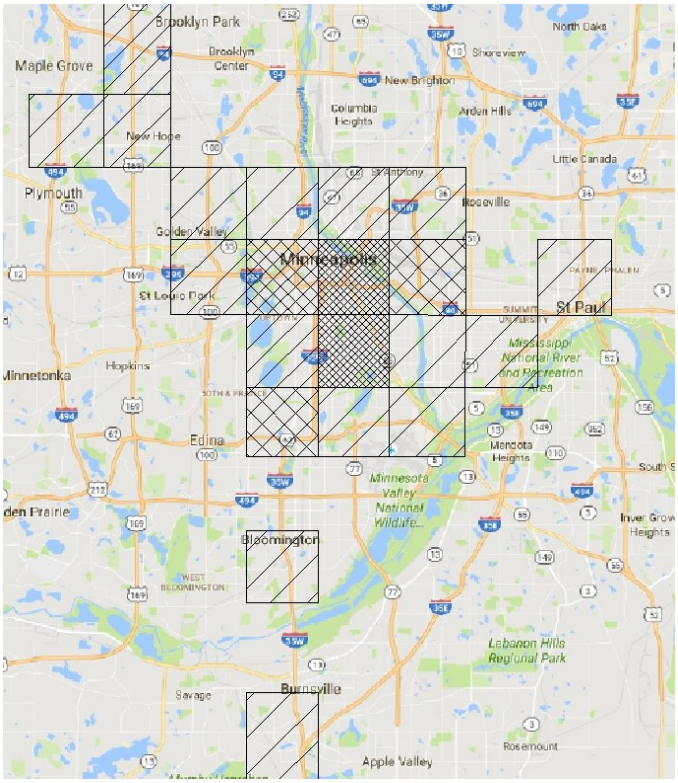

Figure 4-16: Phillips

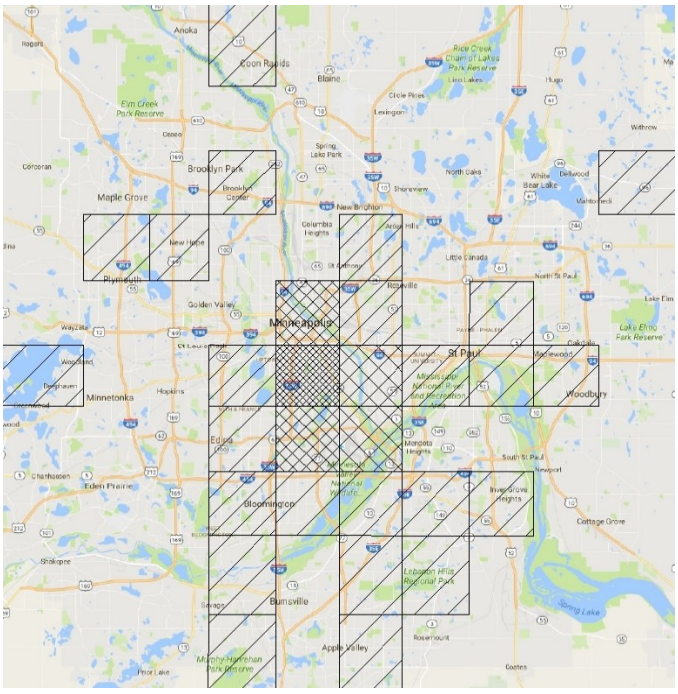

Figure 4-17: Richfield

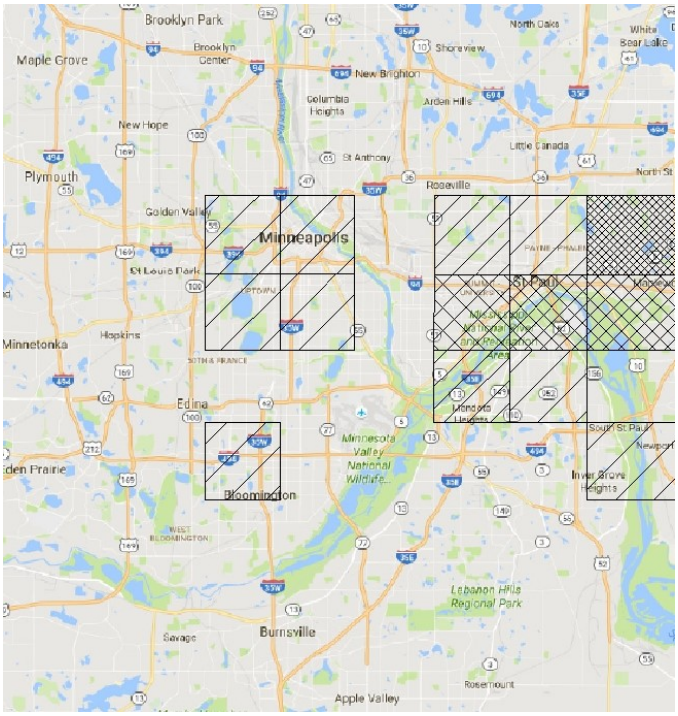

Figure 4-18: Sunray

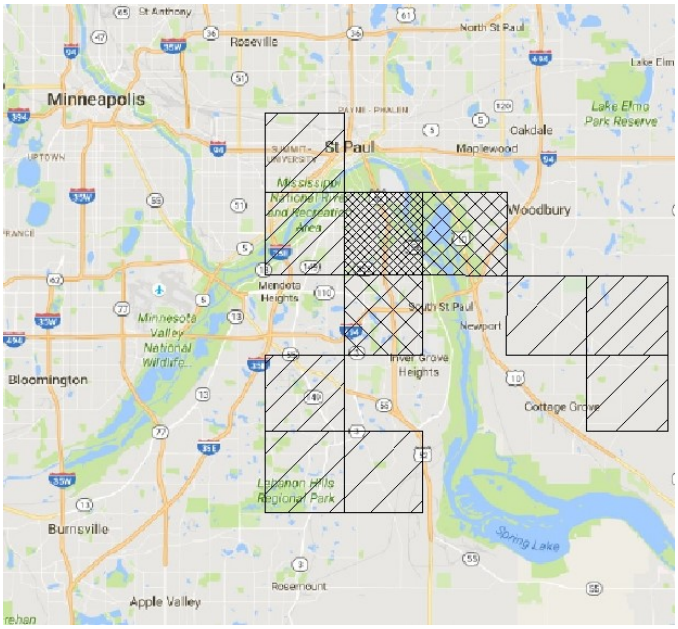

Figure 4-19: West Saint Paul

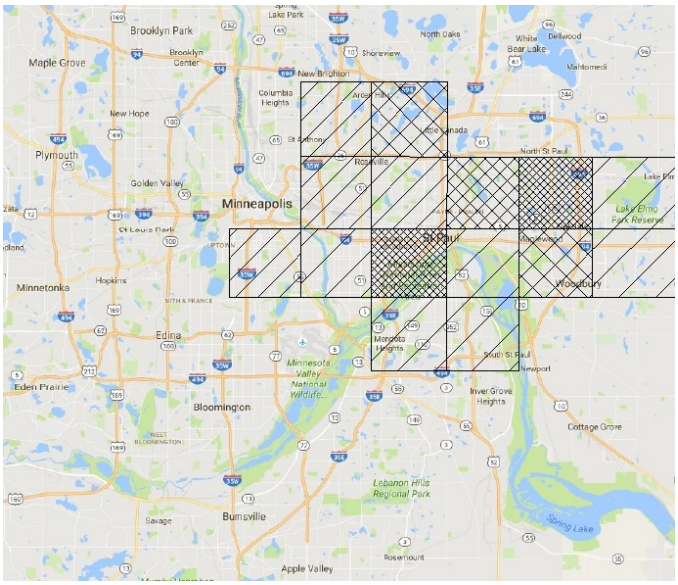

Figure 4-20: West Side Saint Paul

Though suburban ACPs tend to show larger activity spaces overall, several urban ACPs do as well. Specifically, East Side Saint Paul, Midway and Phillips indicate significant minorities of participants visiting first- and second-ring suburbs regularly. This pattern may indicate the importance of reverse commuting to suburban employment centers.

4.2.1 Qualitative Coding of Maps

In addition to aggregating the frequency with which ACP residents visit different areas of the metro, we also qualitatively coded maps for common patterns in the trips being made and activity spaces. This coding allow use to cross-reference characteristics of participants' travel with their answers to other questions.

Table 4-1 shows a heat map of how prevalent each of the conceptual codes listed in rows is for participants from carless households, car deficit households and fully car-equipped households. (Greens indicate the most common codes, yellows, oranges and reds, in that order, less common codes.)

Table 4-1: Map Coding by Car Access

	No car	Car deficit	Fully car-equipped
Central city home			
City & suburbs			
Crosstown commute			
Large activity space			
Small activity space			
StP & Mpls			
Suburban home			
Visit downtown Mpls			
Visit downtown StP			
Visit U of M			

Not surprisingly, participants from fully car-equipped households most commonly have large activity spaces, but it is important to note that the large activity space code is still reasonably common for participants from car deficit and even carless households. Participants from carless households, however, are much less likely to make "crosstown commutes", defined as a regularly made trip beginning outside either downtown, passing through one of the downtowns and continuing beyond it. This may reflect the additional time and complexity added by commonly needed transfers for crosstown

transit trips. It is worth noting as well that participants from both carless and car deficit households frequently visit both central cities and suburbs in their daily trips, further underscoring the fact that even participants with limited automobility depend on some form of regional mobility in their daily lives.

4.2.2 Trip Characteristics by Mode and Car Access

Table 4-2 through Table 4-4 show heat map breakdowns of trip purposes and characteristics for transit, automotive and walking trips (the most common modes used for non-recreational purposes) broken down by participants' automobile access. Not surprisingly, participants with limited or no automobile access use transit for a wider variety of purposes than those without such limitations. The prominence of transit shopping trips for carless participants is especially striking. Participants from fully equipped households restrict their transit use much more to work trips and destinations less convenient to access by car such as the downtowns, the University of Minnesota campus (School) or specific leisure destinations in or near the downtowns.

Table 4-2: Transit Trip Characteristics by Car Access

	Fully car equipped	Car deficit	No car
Downtowns			
Eat out			
Emergencies			
Entertainment			
Everywhere			
Friend			
Home			
Leisure			
Recreation			
Out of town			
Visit parents			
Personal business			
Place of worship			
School			
Shopping			

Social services			
Spouse or partner			
Weather			
Work			

One of the most interesting aspects of Table 4-3 is the variety of automotive trips made by participants from carless households. These trips take the form both of borrowing other people's cars and carpooling with or getting rides from others. Shopping and work stand out as necessary trips dependent on access to other people's cars in one way or another. Participants from fully car equipped and car deficit households report giving each other rides with some frequency.

Table 4-3: Auto Trip Characteristics by Car Access

	Fully car equipped	Car deficit	No car
Borrow			
Carpool			
Visit children			
Downtowns			
Eat out			
Entertainment			
Everywhere			
Friend			
Get rides			
Give others rides			
Home			
Leisure			
Recreation			
Out of town			
Visit parents			
Personal business			

Place of worship			
School			
Shopping			
Social services			
Access transit			
Weather			
Work			

Participants with all levels of automobile access report walking for a wide variety of trip purposes. The nearly uniform moderate to high rates of walking for carless residents suggests that their mobility needs are not met by the motorized modes they have some form of access to. This fact is underscored by the use of walking to make trips in response to personal emergencies.

Table 4-4: Walking Trip Characteristics by Car Access

	Fully car equipped	Car deficit	No car
Downtowns			
Eat out			
Emergencies			
Entertainment			
Everywhere			
Friend			
Home			
Leisure			
Recreation			
Nearby			
Personal business			
School			
Shopping			
Social services			

Access transit			
Weather			
Work			

4.3 JOB SEARCHES

In interest of considering transportation accessibility in the broader context of access to opportunity, the survey included several questions about participants job search processes and resources, including one (shown in Figure 4-21) where participants were asked to circle the area of the metro they would feel able to look for jobs in.

Interestingly, the number of areas in which participants are able and/or willing to search for jobs varies relatively little based on car access, though members of fully car-equipped households are less likely to only search for jobs in one central city or general area of the suburbs. This may reflect a mix of the variety of mobility strategies employed by members of car deficit and carless households and the simple necessity of searching for jobs where jobs are. It is important to note that this finding does not measure how burdensome job searches and, if successful, commutes would be for each group.

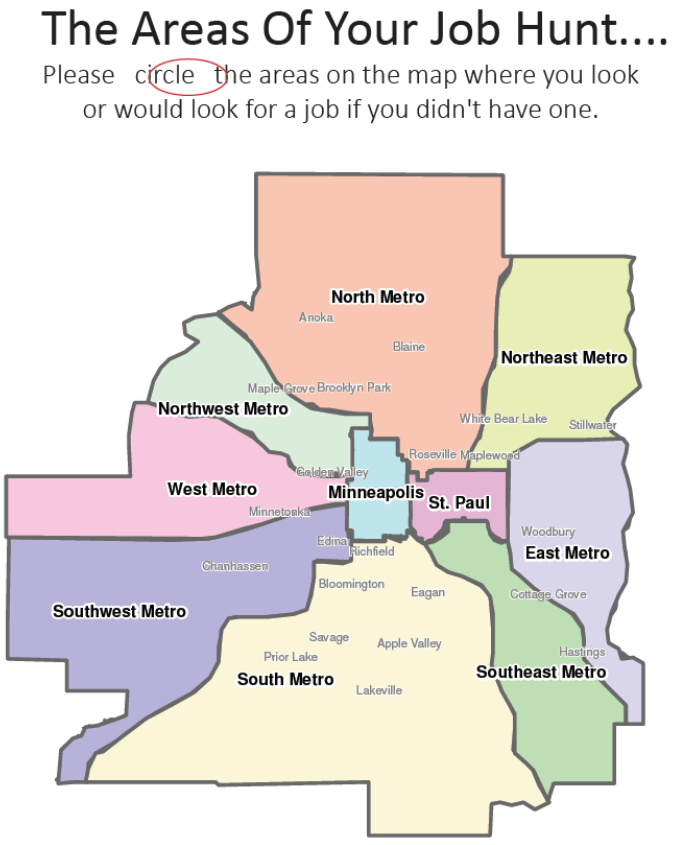

Figure 4-21: Job Search Areas Question

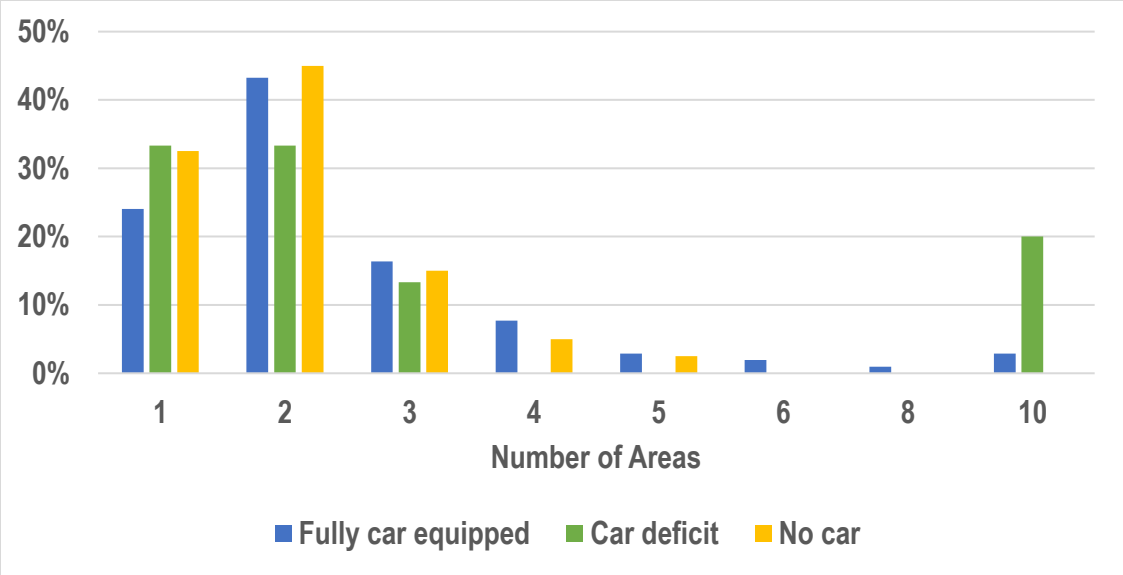

Figure 4-22: Breadth of Job Searches by Car Access

4.4 EXPERIENCE ACCESSING AND USING TRANSIT

The survey concluded with a page of questions for at least occasional transit users. Participants were asked to sketch a map from their home to the transit stop they most commonly use, as well as from a destination they commonly visit by transit to the transit stop they would most commonly use to begin their return journey. These sketches acted as memory aids for details about the conditions participants face accessing transit. For example, the process of drawing the map allowed the facilitator to ask about issues such as street crossings, sidewalk condition, personal security, traffic safety and snow removal in a relatively intuitive manner for the participant. Participants were also asked to share their overall experience using transit. Responses to all questions were coded for qualitative analysis.

Table 4-5: Transit Access Coding by Car Access

	Fully car equipped	Car deficit	No car
Ability			
Bike and ride			
Convenient transit			
Crowded			
Cultural concerns			
Discomfort			
Distance to transit			

Downtowns			
Night time			
No service			
Out of town			
Park and ride			
Personal security			
Service quality			
Traffic safety			
Transit facilities			
Waiting time			
Weather			

4.4.1 Accessing Transit

Table 4-5 shows codes for participants' experiences accessing transit broken down by car access. Notably, the most common codes are the same regardless of participants' level of automobile access. Specifically, personal security, traffic safety, waiting time and weather protection are identified as significant issues by all three groups. This pattern suggests these issues affect riders from a variety of social strata, and that concerns frequently focused on in efforts to attract choice riders are shared by captive riders, as well. If anything, carless participants report somewhat more such issues. This may stem in part from dilapidated infrastructure in poorer neighborhoods, as well as from the fact that carless riders frequently have no choice other than to use transit for certain trips, leading to them experiencing unpleasant transit access trips riders with cars can avoid by using a different mode.

Other shared, though less common, issues between groups include the distance to a transit stop and issues with accessing transit at night—primarily safety and security concerns magnified at night, as well as complaints of less frequent service. A subset of all three groups, however, shares an understanding of transit as convenient—at least for the trips they use it for.

Concerns about crowded and uncomfortable transit vehicles, transit service quality in general (including frequency, trip times and reliability) and particularly the quality of transit facilities (such as bus shelters and transit centers) are reported by carless participants but not shared with members of the other groups. This difference may reflect participants with other transportation options only choosing transit for trips where these issues do not arise.

4.4.2 Overall Transit Experience

Concerns about using transit at night, as well as about transferring from one route to another are shared by participants from fully car-equipped households and car-deficit households, but not carless households. This pattern may reflect higher comfort levels using transit among carless participants.

These patterns are underscored by multiple individual statements made by participants, either in writing or verbally to facilitators. Figure 4-23 shows a word cloud of the 100 most commonly mentioned words in participants' comments about their experiences using transit. The prominence of "winter", "waiting", "time", "security", "traffic" and "safety directly echo common conceptual codes. Other common words such as "need", "better", "shelters", "crossing" and "service" underscore participants' desire for transit improvements in additional detail.

Table 4-6 shows coding for the question about overall experiences using transit, again broken down by car access. A general desire for more service is widely shared among all three groups, as are concerns about personal security, traffic safety, quality of transit facilities, waiting time and weather protection, largely echoing responses to the questions specifically about accessing transit. (Some participants used the question about their overall experiences using transit to expand on their descriptions of accessing transit, indicating a high degree of importance for access and egress legs in shaping the experience of their transit trips.)

Concerns about using transit at night, as well as about transferring from one route to another are shared by participants from fully car-equipped households and car-deficit households, but not carless households. This pattern may reflect higher comfort levels using transit among carless participants.

These patterns are underscored by multiple individual statements made by participants, either in writing or verbally to facilitators. Figure 4-23 shows a word cloud of the 100 most commonly mentioned words in participants' comments about their experiences using transit. The prominence of "winter", "waiting", "time", "security", "traffic" and "safety directly echo common conceptual codes. Other common words such as "need", "better", "shelters", "crossing" and "service" underscore participants' desire for transit improvements in additional detail.

Table 4-6: Overall Transit Experience Coding by Car Access

	Fully car equipped	Car deficit	No car
Ability			
Bike and ride			

Children			
Cleanliness			
Convenient transit			
Cost of transport			
Crowded			
Cultural concerns			
Distance to transit			
Downtowns			
Emergencies			
Environmental concerns			
Fare collection			
Information			
More service			
Night time			
No service			
Parking			
Personal security			
School			
Traffic safety			
Transfers			
Transit facilities			
Travel time			
Waiting time			
Weather			
Work			

Figure 4-23: Most Commonly Mentioned Words Regarding Transit Use Experience

Going deeper into individuals' responses, the following quote is from an Ethiopian immigrant woman living in public housing in West Side St. Paul. She is a currently unemployed former cook with a household income of less than $15,000 per year. She lives with a disability which affects her access to transportation, as well as health problems which affect her access to transportation and jobs. She is unable to drive.

Subject expresses concern about shelters for winter and ice on sidewalks and near bus stops. Weekends are difficult because frequency is so low. Personal safety is a concern always; subject stays alert and watchful; subject expresses need for better security at MOA bus and train areas.

The implications of difficulties using transit to access job opportunities are brought into shar detail by the following comments from a Black-Native American woman who lives in the Richfield area. She does not drive or have a car in her household, and has a household income between $15,000-$25,000. She works as a personal care assistant.

Need more buses to the suburbs; more shelters; more security at bus stops. [I've] had to turn down offers in Eagan and Apple Valley due to lack of transportation access.

The quote below shows the importance of weather and personal security concerns, as well as how their acuteness depends in part on the particular circumstances of an individual's commute. These comments

come from a white woman who works in social services, has a household income of less than $15,000 per year and fells insecure in her housing. She lives in a carless household, is not licensed to drive, and has both a disability and health problems which affect her access to transportation and jobs. Differing from the common perception of a poor, transit-dependent person, she has a bachelor's degree.

Icy sidewalks. Have been robbed waiting for bus. Frostbite concerns waiting for transfer; locked out of bus shelters in Downtown Saint Paul; heat lamps not always working. Bus stops dark or poor lighting. Snow banks and ice at stops are hard to navigate.

Desire for improved transit service is by no means confined to transit-dependent participants, however, as shown by this quote from a healthcare worker from Hopkins. High school-educated, with a household income of $15,000-$25,000 per year, he currently drives most places. His comments also disrupt the common narrative that suburban rail projects benefit wealthy commuters in high-status jobs at the expense of working people.

Southwest light rail would be a huge improvement. I would use light rail to get around more than a car if available. I also have friends that would use the light rail over the bus or drive.

CHAPTER 5: CONCLUSIONS

The survey results paint a clear picture of opportunity constrained by mobility in Twin Cities areas of concentrated poverty. Differing sizes of activity spaces based on car access, as well as direct statements about using transit, show a widely shared understanding of a need for improved transit in these areas. In addition, comments about difficulties with transit use combined with the significant number of participants from carless and car deficit households who do have large activity spaces or crosstown commutes point to a group of Twin Cities residents who have no choice but to accept burdensome commutes to get by.

These difficulties are more complex than a simple case of transit-dependent versus not transit-dependent. While issues and concerns with using transit are common, they are not universal—a number of participants at all levels of car access describe transit as convenient. In addition, the mere fact that one has access to a car does not mean one is not burdened by transportation, particularly in the case of low-income ACP residents who make crosstown commutes. These participants fit the pattern of "captive drivers" more than individuals who are genuinely advantaged in terms of transportation.

Specifically regarding issues with transit, two general sets of issues appear. One set of issues concerns regional accessibility—what destinations one can access, or how convenient or burdensome it is to access needed regional destinations such as a workplace. These issues deal with the functional possibility of using transit for a given trip. The other set of issues revolve around local access to transit, and are primarily concerned with things like safety, comfort and security. These issues deal more with the pleasantness of using transit, but still powerfully shape the quality of life of regular transit riders—particularly transit-dependent riders who cannot self-select for more pleasant trips.

These local issues appear to play a prominent role in defining participants' overall experiences of using transit. Though some issues concerning the in-vehicle experience do appear—such as crowding, particularly for bus riders, travel times and negative interactions with other passengers—participants' descriptions of their overall experiences focus strongly on issues of local access to transit. This is the case despite two preceding questions directly concerned with local access to transit. We find in-depth discussion of issues participants face reaching transit stops and waiting for buses and trains to arrive. Beyond the issues mentioned above, participants discuss their in-vehicle experiences relatively little. This pattern may simply reflect the fact that Metro Transit on the whole has a relatively new, well-maintained bus fleet with reasonable load factors in most cases and generally good on time performance. Given these conditions, accessing the transit system via the street network may well stand out as the key issue in using transit.

5.1 RECOMMENDATIONS

These findings lead us to the conclusion that commonly understood "best practices" in transit-oriented community planning—such as universal provision of wide, well-maintained sidewalks, traffic calming

measures on streets, frequent, convenient and safe street crossings, as well as the short walking distances that come with compact development and diverse land uses—are best practices for everyone. It is worth noting the types of improvements that a mostly low-income group of ACP residents, with people of color over-represented, compared to metro or even central city populations are calling for: better pedestrian environments, improved security, more attractive stops and stations, more frequent service, less crowded vehicles, in some cases even rail implementation in particular. These are exactly the same improvement efforts commonly made to attract choice riders. These attributes of neighborhoods, streets and transit systems are not demanded by those with other options because of stigmas or fads, but because they are genuinely good things. It bears repeating, but should come as no surprise, that they are demanded by marginalized people who rely on transit when we listen to their demands.

It follows from this realization that pedestrian- and transit-oriented design are social equity issues in addition to being quality-of-life and transit system efficiency issues. Their importance in areas of concentrated poverty is magnified by the fact that, because they are not yet standard features of American city planning, they are frequently implemented in response to pressure from politically engaged—and frequently socially advantaged—activists for specific projects. In addition, the current under-supply of pedestrian- and transit-oriented neighborhoods can lead to gentrification concerns when pedestrian and transit improvements are implemented piecemeal in disadvantaged areas. For these reasons, we believe the equitable implementation of a modern regional transit system in the Twin Cities requires a comprehensive program of pedestrian and bicycle improvements aimed at making an easy, safe, pleasant walk to a transit stop and wait for a transit vehicle an unremarkable occurrence throughout the region, with a special focus on areas of concentrated poverty.

The benefits of such a program of transit-oriented neighborhood retrofits are multiple. First, as is already well known, such improvements tend to attract increased ridership, making existing service more productive and potentially enabling further service improvements, which in turn attract increased ridership, etc.

Second, a program of transit service and neighborhood environment improvements aimed at significantly improving the experience of using transit in areas of concentrated poverty could also help retain ridership as residents of these areas (hopefully) improve their economic circumstances through transit-based access to opportunity. Our results indicate that, in many cases, transit-dependent riders may purchase cars and stop riding as soon as they are at all able to, due to the time and stress burdens imposed on them by using transit. Improving their transit experiences sufficiently could lead to more transit-dependent riders becoming choice riders as their circumstances improve, potentially benefitting both the transit system and household budgets.

Finally, it is clear from our results that improving the experience of using transit in areas of concentrated poverty will improve the lives of many Twin Cities residents. Given the deep levels of disadvantage reflected in many of our survey participants, it seems fair to say that improved planning for both transit

service and pedestrian access to transit in these areas will disproportionately benefit those who need it most.

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APPENDIX A:
GRAPHICALLY FACILITATED SURVEY INSTRUMENT

Getting There.....

Please circle the modes and things that help you get around and how often you use them.

Please *write* where you go.

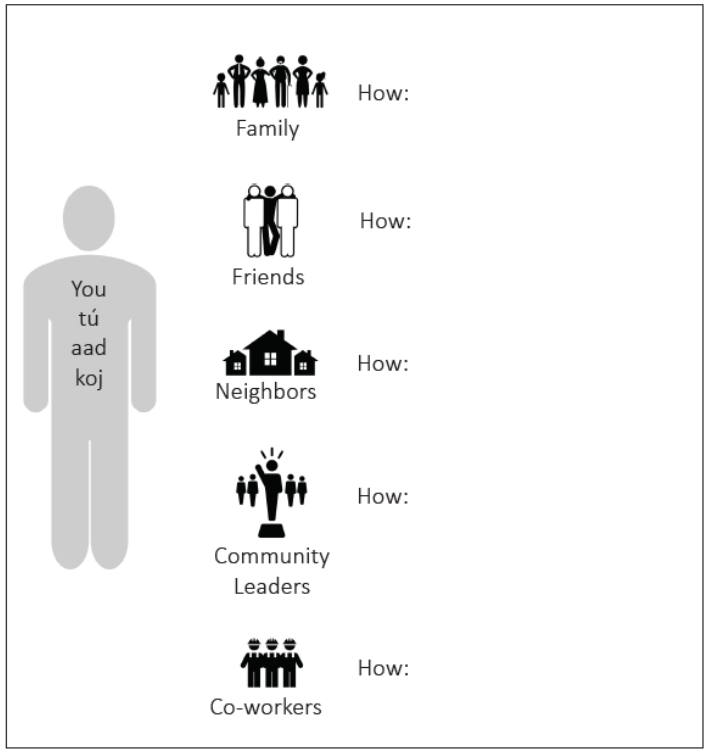
Auto	Rarely Sometimes A lot	Where you go:	
Public Transit	Rarely Sometimes A lot		
Personal Bicycle	Rarely Sometimes A lot		
Bike Sharing	Rarely Sometimes A lot		
Walking	Rarely Sometimes A lot		
Other	Rarely Sometimes A lot		

Go-To Card	Rarely Sometimes A lot	Where you go:
Cash	Rarely Sometimes A lot	
Cellphone	Rarely Sometimes A lot	
Apps	Rarely Sometimes A lot	
Taxi	Rarely Sometimes A lot	
Other	Rarely Sometimes A lot	

A-1

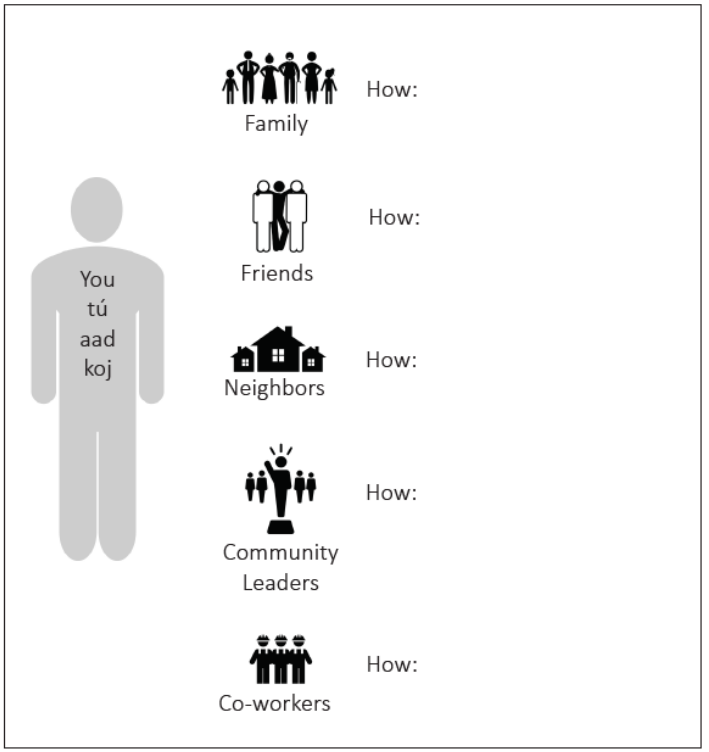
Getting Rides.....

Please circle who helps you get around and *write* how they help.



Getting A Job: People.....

Please circle who tells you about job opportunities or helps you get a job in other ways and *write* how they help.



A-2

Getting A Job: Places.....

Please circle where you find out about job opportunities and where you get other kinds of help finding a job and *write* how these places help.

Library — How:

School — How:

Place of Worship — How:

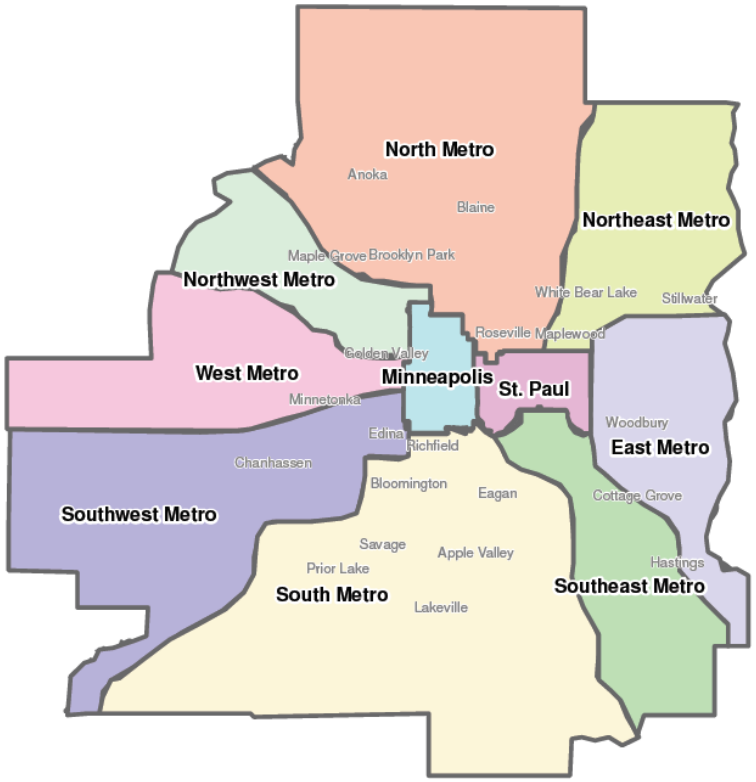
Community Spots — How:

Internet — How:

Workforce Center — How:

The Areas Of Your Job Hunt....

Please circle the areas on the map where you look or would look for a job if you didn't have one.



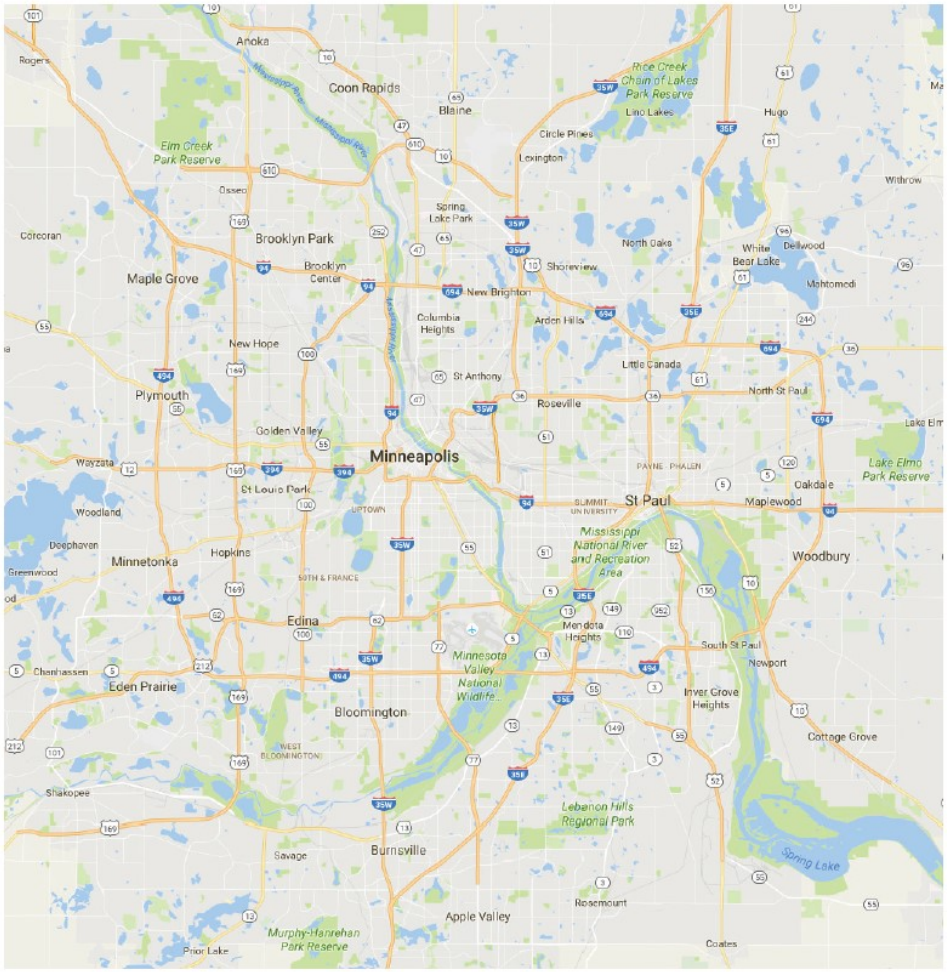
A-3

The map of your typical daily travel:

Please:

- Draw circled numbers ①, ②, ③, etc. to show the places you typically go;
- Draw arrows to show how you move between these places;
- *Write* the name of each place (home, work, shopping, etc.);
- Circle what mode you use to get there, and;
- *Write* how long it takes you to get there.

Point	Name of Place	How you get there	Minutes
①	Home		
②			
③			
④			
⑤			
⑥			
⑦			
⑧			
⑨			
⑩			
⑪			
⑫			



A-4

Complete this page if you use transit.

Accessing Transit....

From door to transit stop and vice versa

Accessing from home to transit stop

Please sketch a map and write about access barriers from home to transit.

Home

- Traffic safety
- Personal security
- Nearness of transit stop
- Waiting time
- Winter experience
- Other

Accessing from frequently visited place to transit stop

Please sketch a map and write about access barriers from a frequently visited place to transit stop.

Frquently Visited Place

- Traffic safety
- Personal security
- Nearness of transit stop
- Waiting time
- Winter experience
- Other

Overall Transit Experience

Please share your experiences using transit, including what you like, or dislike and what you would like to see in the future.

A-5

Who you are.....

Please circle or write about yourself.

Please circle and write about your employment and work history.

Employment Status

Are you currently employed?

Yes

Occupation/Industry_____

Time in job_____

Hours per week_____

No

Last occupation/ Industry_____

Time out of work_____

Please circle the highest level of education you have completed.

Education

- Less than high school
- High school or GED
- Some college, no degree
- Associates degree
- Bachelor's degree
- Graduate/professional degree

Please circle who lives with you.

Place a check mark ✓ by who you take care of.

Family Status

- Spouse
- Unmarried partner
- Children under 6
- Children 6-18
- Adult Children
- Parent(s)/In-Law(s)
- Sibling(s)
- Other_____

Please circle your current housing situation.

Housing Status

- Rent
- Own
- Other_____

Do you feel secure in your current housing?

Yes No

Please circle to answer the following:

Demographics

Are you Hispanic/Latino/a? Yes No

What race(s) do you consider yourself?

- Native American
- Asian
- Black/African American
- White
- Other_____

What is you gender? _____

Where you born in the United States? Yes No

What language are you most comfortable speaking?

- English
- Español
- Hmoob
- Soomaaliga
- Other_____

Please circle and *write* to show your access to a car.

Car Access

How many cars are there in your household? _____

Do you have a driver's license? Yes No

Please circle the combined income of your whole household.

Household Income

- Less than $15,000
- $15,000-$25,000
- $25,000-$35,000
- $35,000-$50,000
- $50,000-$75,000
- $75,000-$100,000
- More than $100,000

How large a burden is the cost of getting around for you?

- No burden at all
- A small burden
- Something of a burden
- A large burden

Please circle to answer the following:

Health

Do you have any health problems that affect your access to:

Transportation? Yes No

Jobs? Yes No

Physical Ability

Do you have any disabilities that affect your access to:

Transportation? Yes No

Jobs? Yes No

A-6

#: Location: Interviewer: Date:

APPENDIX B:
GROUND TRUTHING WORKSHEET

Location: Date: Person:

NUMBER:
Address: # _____ Name: Av. St. Other: _____
Number of Floors: 1 2 3 4 More
Building type: Complex Apt. Building Multifamily Det. Row House Other: _____
Exterior: Wood Stucco Exposed Brick Other: _____
Features: Walk-ups Porch Converted Frontage Community Room
Primary Site Yes No
Special Notes: _____

NUMBER:
Address: # _____ Name: Av. St. Other: _____
Number of Floors: 1 2 3 4 More
Building type: Complex Apt. Building Multifamily Det. Row House Other: _____
Exterior: Wood Stucco Exposed Brick Other: _____
Features: Walk-ups Porch Converted Frontage Community Room
Primary Site Yes No
Special Notes: _____

NUMBER:
Address: # _____ Name: Av. St. Other: _____
Number of Floors: 1 2 3 4 More
Building type: Complex Apt. Building Multifamily Det. Row House Other: _____
Exterior: Wood Stucco Exposed Brick Other: _____
Features: Walk-ups Porch Converted Frontage Community Room
Primary Site Yes No
Special Notes: _____

NUMBER:
Address: # _____ Name: Av. St. Other: _____
Number of Floors: 1 2 3 4 More
Building type: Complex Apt. Building Multifamily Det. Row House Other: _____
Exterior: Wood Stucco Exposed Brick Other: _____
Features: Walk-ups Porch Converted Frontage Community Room
Primary Site Yes No
S Special Notes: _____

NUMBER:
Address: # _____ Name: Av. St. Other: _____
Number of Floors: 1 2 3 4 More
Building type: Complex Apt. Building Multifamily Det. Row House Other: _____
Exterior: Wood Stucco Exposed Brick Other: _____
Features: Walk-ups Porch Converted Frontage Community Room
Primary Site Yes No
Special Notes: _____

NUMBER:
Address: # _____ Name: Av. St. Other: _____
Number of Floors: 1 2 3 4 More
Building type: Complex Apt. Building Multifamily Det. Row House Other: _____
Exterior: Wood Stucco Exposed Brick Other: _____
Features: Walk-ups Porch Converted Frontage Community Room
Primary Site Yes No
Special Notes: _____